S/M No : TCM908FEF0

Service Manual

COLOR TELEVISION

CHASSIS : CM-908/F

MODEL : DTR-29M5ME/MP/MT/MZ
DTR-29M6ME/MP/MT/MZ
DTR-29M7ME/MP/MT/MZ
DTR-29U1ME/MP/MT/MZ
DTR-29U5ME/MP/MT/MZ

MODEL OPTION LIST

MODEL	TEXT	PIP
ME	O	O
MP	X	O
MT	O	X
MZ	X	X

Caution
: In this Manual, some parts can be changed for improving. their performance without notice in the parts list. So, if you need the latest parts information, please refer to PPL(Parts Price List)in Service Information Center(http://svc.dwe.co.kr)

DAEWOO ELECTRONICS

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1. SPECIFICATIONS

Items	Model	DTR-29M5ME/MP/MT/MZ DTR-29M6ME/MP/MT/MZ DTR-29M7ME/MP/MT/MZ DTR-29U1ME/MP/MT/MZ DTR-29U5ME/MP/MT/MZ
TV Standard	Color system	PAL/SECAM, NTSC-4.43(AV)
	Sound system	B/G, D/K, I
Rated Voltage		AC 110-250V, 50/60Hz
Power consumption		105W
Sound Output Power		7W+7W
Channel Coverage		VHF-L : IC1-S6CH (43.25MHz~140.25MHz) VHF-H : IC1-S36CH (147.25MHz~423.25MHz) UHF : S37-C57CH(431.25MHz~863.25MHz)
Tuning System		FS Tuning System
Program No. Indication		ON-Screen Display
Program Selection		200 Programs
Aux. Terminal		AV input 1< RCA : Input, Scart (Option) : Input, Output > AV Input 2 < SIDE > DVD1, DVD2 OUTPUT< OPTION: TV OUT or Monitor OUT >
Remote Control Unit		R44C07
Screen size		67.6Cm

2. SAFETY INSTRUCTION

NOTE

BEFORE SERVICING THIS CHASSIS READ THE "X-RAY RADIATION PRECAUTIONS", "SAFETY PRECAUTIONS" AND "PRODUCT SAFETY NOTICE" BELOW.

X-RAY RADIATION PRECAUTIONS

1. Excessive high voltage can produce potentially hazardous X-RAY RADIATION. To avoid such hazards, the high voltage must not exceed the specified limit. The nominal value of the high voltage of this receiver is 25kV(21") at max beam current. The high voltage must not, under any circumstances, exceed 27kV(21"). Each time a receiver requires servicing, the high volt-age should be checked. It is recommended the reading of the high voltage recorded as a part of the service recorded as a part of the service records. It is important to use an accurate and reliable high voltage meter.
2. The only source of X-RAY RADIATION in this TV receiver is the picture tube. For continuous RADIATION protection, the replacement tube must be exactly the same type tube as specified in the "PART LIST".

SAFETY PRECAUTIONS

1. Potentials of high voltage are present when this receiver is operating. Operation of the receiver outside the cabinet or with the back cover removed involves a shock hazard from the receiver.

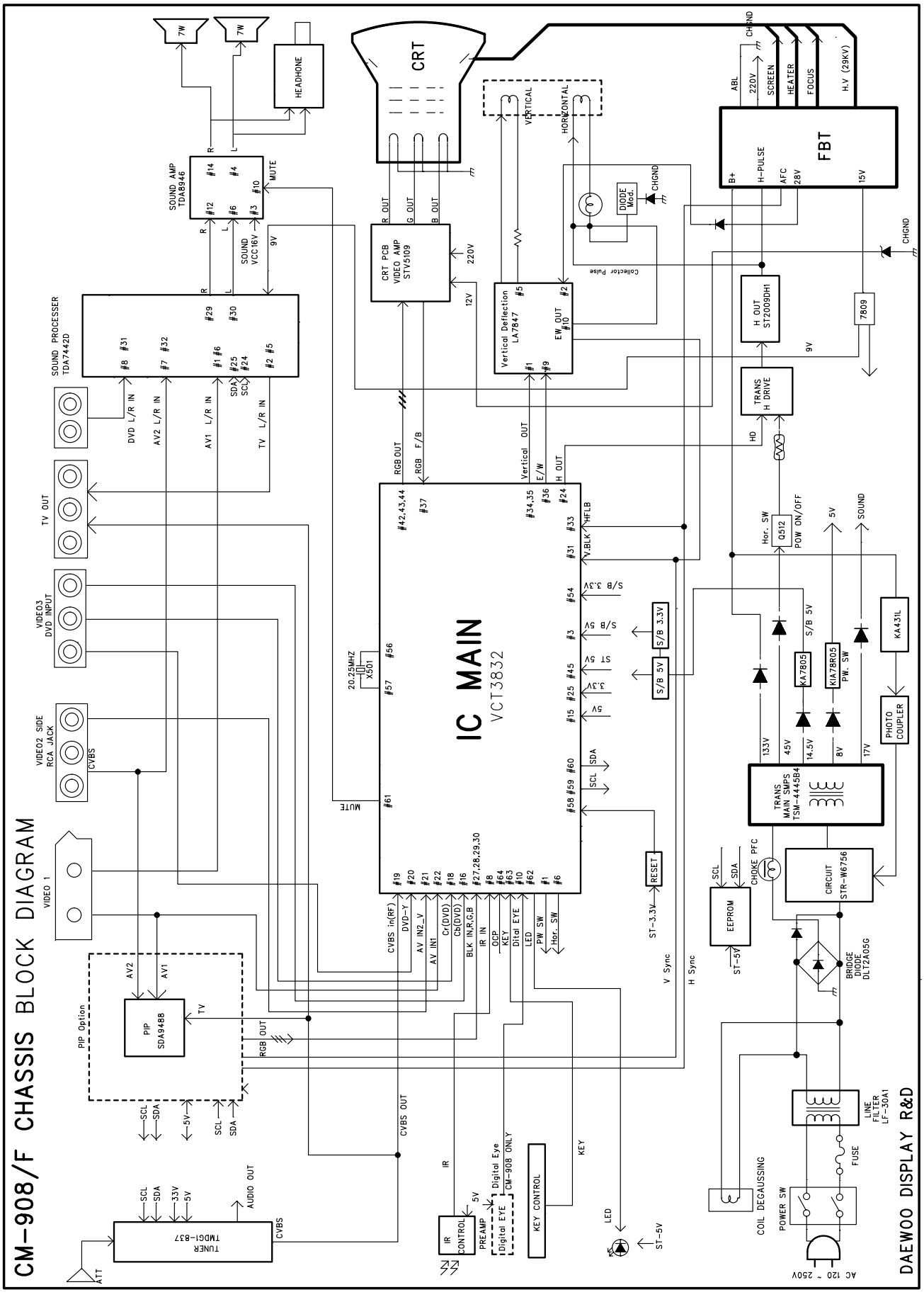
1) Servicing should not be attempted by anyone who is not thoroughly familiar with the precautions necessary when working on high voltage equipment.
2) Always discharge the picture tube to avoid the shock harzard before removing the anode cap.
3) Discharge the high potential of the picture tube before handling the tube. The picture tube is highly evacuated and if broken, glass fragments will be violently expelled.

2. If any FUSE in this TV receiver is blown, replace it will the FUSE specified in the "PART LIST".
3. When replacing a high wattage resistor (oxide metal film resistor) in circuit board, keep the resistor 10mm away from circuit board.
4. Keep wires away from high voltage or high temperature components.
5. This receiver must operate between AC 100-240 volts,50/60Hz. NEVER connect to DC supply or any other power or frequency.

PRODUCT SAFETY

Many electrical and mechanical parts in this chassis have special safety-related characteristics.
These characteristics are often passed unnoticed by a visual inspection and the X-RAY RADIATION protection afforded by them cannot necessarily be obtained by using replacement components rated for higher voltage, wattage, etc.
Replacement parts which have these special safety characteristics are identified in this manual and its supplements, electrical components having such features are identified by designated symbol ⚠ on the "PART LIST".
Before replacing any of these components, read the "PARTLIST" in this manual carefully.
The use of substitute replacement part which do not have the same safety characteristics as specified in the "PART LIST" may created X-RAY RADIATION.

3. CIRCUIT BLOCK DIAGRAM



4. ALIGNMENT INSTRUCTIONS

1. SERVICE REMOCON & EEPROM PRESETTING DATA
   1-1. SERVICE REMOCON : R-34SVC (S/N:48B3034SVC)
   1-2. EEPROM PRESETTING DATA

KEY	Name	Details	BARE			NORMAL		FLAT		WIDE	remark
			PAL	NTSC	NT=PAL+xxx	PAL	NTSC	PAL	NTSC		
S1	Heat-Run	-	-			-					
S2	Screen	-	-			-					
S3	Sound Test	-	-			-					
S4	Picture Test	-	-			-					
S5	BCL	BCL THR	-			150		150			
		BCL GAIN				12		12			
		WHITE PEAK				ON		ON			
S6	Geometry	V-CENTER	3930	3952	182	3640		3720			ADJUST DATA
		V-SIZE	121	120	-1	145	150	137	142		ADJUST DATA
		H-CENTER	82	83	1	740		82			ADJUST DATA
		H-SIZE	-160	-294	-134	740	530	650			ADJUST DATA
		PARABOLA	-160	-158	2	-102		-130		-71	ADJUST DATA
		EW TRAPEZ	36	-3	-39	66		81			
		CORNER	120	120	0	90		90			
		H BOW	143	140	-3	-277		-232			
		H PARALL	-2	-2	0	2		-14			ADJUST DATA
		V LINEAR	-3	-5	+2	1		7			
		S CORRECT	-27	-27	0	-22		-18			
S7	PIP	P H POS	29			33		30			
		P V POS	9			27		26			
		P R/G/B Peak	150/150/150			65/65/65		65/65/65			
		P CONT	04			15		15			
		P BRIGHT	01			10		10			
S8	WHITE BALANCE	R/G/B DRIVE	170/170/170			195/195/195		175/175/175			
		R/G/B BIAS	40/40/40			80/80/80		80/80/80			
S9	SUB BRI	BRM	140			140		140			For SUB-Bright Adjust Reference
S10	NORMAL DATA	BRIGHT	32			32		32			
		CONTRAST	58			63		63			
		COLOR	32			32		32			
		SHARPNESS	48			48		48			
		CORING				20		20			
S11	OPTION	PIP									ME/MP:ON, MZ/MT:OFF
		DIGIT.EYE	ON			ON		OFF			
		TEXT SEL.				OFF		OFF			
		TELETEXT									ME/MT:ON, MZ/MP:OFF
		LARGE	OFF			ON		ON			
		VID FRAME	OFF			ON		ON			
		HOTEL VOL	+00000			+00000		+00000			
		HOTELMODE	OFF			OFF		OFF			
S12	Shipping	-	-			-					
SVC Main Menu		CONT	32			32		32			
		IBRM	140			395		350			For Screen Adjust Reference

SVC KEY EXPLAIN

(S5) BCL THD : MAX BEAM CURRENT ADJUST,DIFFERENT DATA FOR INCH.
BCL GAIN : AVERAGE BEAM ADJUST.
(S6) GEOMETRY : PAL (50Hz) adjust.
AV NTSC is auto correction.
(S10) NORMAL : PICTURE NORMAL data setting.
(SLEEP) : TXT CHECK ON LINE
(SIZE) : GAME FUNCTION CHECK ON LINE
(S11) OPTION
- HOTEL VOLUME : HOTEL MODE MAX VOL DATA SETTING
- HOTEL MODE OFF : ON--> VOL MAX SET& INSTALL DONT OPERATING

* Software option for Function Change

PIP	- ON : With PIP Models (xxxxME/MP seiese) - OFF : Without PIP Models (xxxxMT/MZ seriese)
Digital EYE	- ON : Enable the Digital Sensor (NORMAL MODEL)
	- OFF : Disable the Digital Sensor (FLAT MODEL)
LARGE	- ON : For 29 inch Models (CM-908/F)
	- OFF : For 14~21”” inch Models (CM-908S)
TEXT sel.	LATIN : English,French,Swedish,Czech,German,Spanish,Italian,Estonian EAST: English,Slovakian,Hungarian,Serbian,Albanian,Polish,Turkian,Rumanian RUSSIA : English,Russian,Bulgaian,Ukrainian,Serbian,Montenegro PERSIAN : English,Farsi ARAB : English,Arabic OFF : Teletext Language depends on OSD Language selection ※ Note : If OSD language & text selec. is different then Teletext depends on Text selec.

2.The confirmation of Protection circuit

Protection circuit confirmation is omitted in case of mass production in the factory

2-1. Over Current Protecor (OCP) circuit confirmation

2-1-1. Receive PAL RETMA PATTERN(signal of company:2CH., PAL-B) and adjust STANDARD MODE in PICTURE.

2-1-2. Connect 1M Ω 1/2W between BASE of Q801 and GND, to confirm operating of PROTECTOR.

The next place, to confirm normal operation when the resister(1M Ω) is removed.

2-1-3. After Main Power Switch OFF/ON, to confirm normal operation of picture and sound when turn the set on by remocon.

3.The adjustment of SCREEN

3-1. Confirm the presetting 'IBRM' data of EEPROM according to CRT.

3-2. Press the [S2] KEY of SVC Remocon, horizontal line will be displayed.

3-3. Adjust SCREEN V/R of FBT so that the horizontal line reach the cut-off point.

3-4 To be completed adjustment of screen. Press the [S2] key to escape screen adjustment mode.

4.The adjustment of FOCUS

4-1. Receive PAL RETMA PATTERN(signal of company:2CH., PAL-B).

4-2. Adjust the picture to best distinct picture of 350 Line by revolve Focus Volume.

5.The adjustment of WHITE BALANCE

5-1. NITSUKI Setting : Set Nitsuki to the 'Auto Mode', Reference to the 'B', and System to the 'PAL'.

5-2. Setting the Normal Stats

5-2-1. Adjust Picture to Normal mode.

5-2-2. Adjust the Gain of Nitsuki to suitability by manual when condition is Normal.

- Adjust the standard illumination take within limit bright of Nitsuki and luminosity of SET into acount.
- Exhortative Standard illumination, : High 70Cd/㎡, LOW BEAM : about 15Cd/㎡"

5-2-3. Press the [S8]key of SVC remocon to adjustment of Whit Balance.

X=0.288, Y=0.301

5-2-4. Memorize in Nitsuki after Adjustment of White Balance.

5-3. Adjustment of White Balance

5-3-1.Receive Nitsuki signal.

5-3-2.Adjust Picture to Normal mode.

5-3-3.The Adjustment of High Beam : Adjust R-DRIVE and G-DRIVE to R,G,B BAR come to center.

5-3-4.The Adjustment of Low Beam : Adjust R-BIAS and G-BIAS to R,G,B BAR come to center.

5-3-5.Repeat 5-3-3 and 5-3-4 to R,G,B BAR come to within center ±1.

6.The adjustment of GEOMETRY

6-1. Press the [S-6]key on the SVC remocon to call up the Geometry mode.
And then, Geometry OSD will be displayed.

6-1-1. All adjustment is base on PAL(50Hz),
but it can be base on NTSC(60Hz) in case of need.

6-2. The adjustment of VERTICAL CENTER

6-2-1.Receive PAL RETMA pattern(signal of company:PAL-B 2CH).

6-2-2.Press the PR up/down Keys(▲/▼) to select V CENTER.
Adjust with Vol Up/Down (◀/▶) keys so that the center mark of the CRT may be located on the horizontal line in the middle of the pattern. In case of no center mark, adjust with Vol Up/Down (◀/▶) keys to obtain a vertically symmetrical pattern.

6-3. The adjustment of VERTICAL SIZE

6-3-1. Receive PAL RETMA pattern(signal of company:PAL-B 2CH).

6-3-2. Press the PR up/down Keys (▲/▼) to select V-SIZE.
Adjust with Vol Up/Down (◀/▶) keys so that the upper and the lower of RETMA pattern may be located at the boundaries of the screen.

6-4. The adjustment of HORIZONTAL CENTER

6-4-1. Receive PAL RETMA pattern(signal of company:PAL-B 2CH).

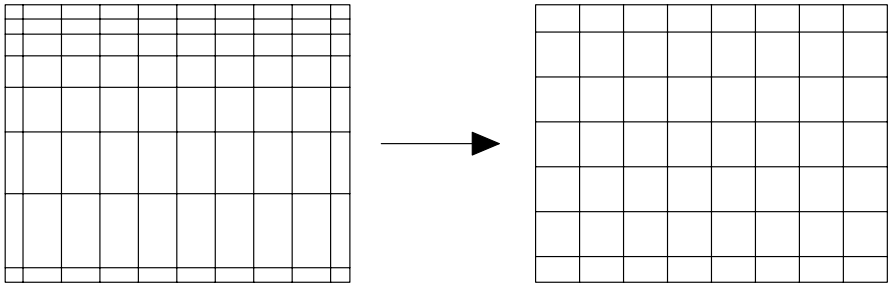
6-4-2. Press the PR up/down Keys (▲/▼) to select V-SIZE.
Referring to the both side scales, adjust with Vol Up/Down (◀/▶) keys so that RETMA pattern may be symmetrical.

6-5. The adjustment of Vertical Linearity

6-5-1. Receive PAL CROSSHATCH pattern(signal of company:PAL-B 5CH).

6-5-2. Fix adjustment of Vertical Linearity after EEPROM presetting, but it can be adjusted in case of need.

6-5-3. Press the PR up/down Keys (▲/▼) to select V LINEAR.
Adjust Vertical Linearity with Vol Up/Down (◀/▶) keys.

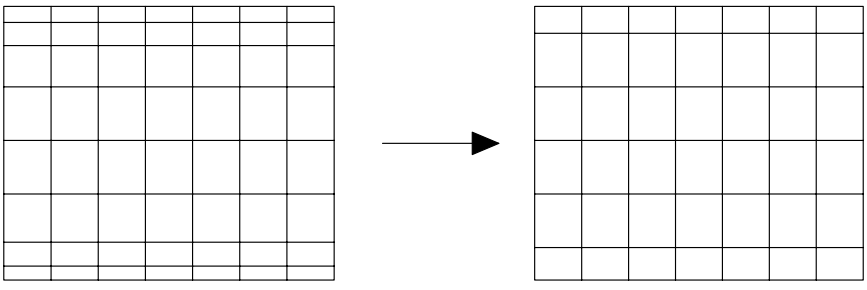


6-6. The adjustment of VERTICAL S-Correction

6-6-1. Receive PAL CROSSHATCH pattern(signal of company:PAL-B 5CH).

6-6-2. Fix adjustment of Vertical S-Correction after EEPROM DATA presetting, but it can be adjusted in case of need.

6-6-3. Press the PR up/down Keys (▲/▼) to select S CORRECT.
Adjust S-Corrction with Vol Up/Down (◀/▶) keys.



7. THE ADJUSTMENT OF SUB-PICTURE (SUB-BRIGHT,SUB-CONTRAST)

7-1. Receive PAL RETMA PATTERN(signal of company:2CH., PAL-B)

7-2. Press the [S9] KEY of SVC Remocon, BRM OSD wil be displayed.

7-3. The adjustment of SUB-BRIGHT

7-3-1. Press the PR up/down Keys (▲/▼) to select SUB-BRIGHT in SUB-PICTURE MENU. Adjust SUB-BRIGHT with Vol Up/Down (◀/ ▶) keys.

7-3-2. Adjust With BRM, When SUB-BRIGHT is lacking in margin of adjustment.

7-3-3. Standard of adjustment : Adjust till instant of 1, 2th cordon disappear in RETMA CONTRAST CHART(signal of company).

7-3-4. When Sub-Picture mode was exited after SUB' s adjustment, Normal vlaue is brighter(about 18%) than adjustment-point(about 10%) of adjustment-mode because BRIGHT is set to rise 2~3 step.

8. THE ADJUSTMENT OF PIP

8-1. Receive PAL RETMA pattern(signal of company:PAL-B 2CH) and Color Bar.

8-2. Press the [S7] KEY of SVC Remocon, PIP-Adjustment OSD wil be displayed.

8-3. Fix adjustment of PIP after EEPROM DATA presetting, but it can be adjusted in case of need.

8-4. Adjust PIP after GEOMETRY, WHITE BALANCE and SUB-BRIGHT are adjusted.

8-5. List of adjustment

① PIP H POSITON : Adjustment of H-position Sub-Picture,
(Reference : Presetting Value of EEPROM = 38)

② PIP V POSITON : Adjustment of V-position of Sub-Picture,
(Reference : Presetting Value of EEPROM = 27)

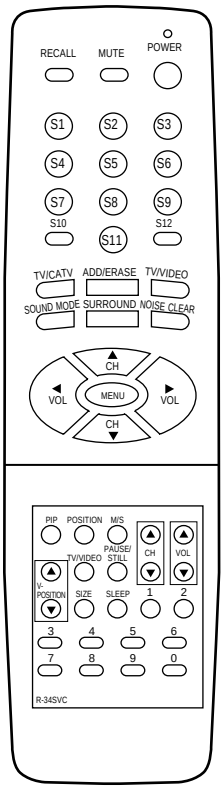
③ PIP R/G/B Peak : Adjustment of Gain of PIP IC R,G,B Output
(Reference : Presetting Value of EEPROM = 85)

④ P CONTRAST : Adjustment of AC Gain(Contrast) of PIP IC RGB Output
(Reference : Presetting Value of EEPROM = 10)

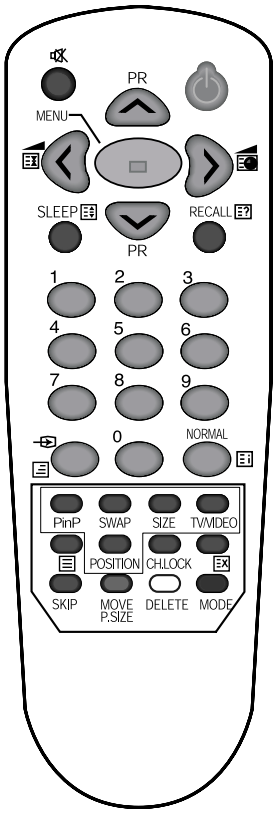
⑤ P BRIGHT : Adjustment of DC Level(SUB BRIGHT) of PIP IC RGB Output
(Reference : Presetting Value of EEPROM = 15)

9. REMOCON

9-1. SERVICE REMOCON



9-2. USER REMOCON



9-3. SERVICE REMOCON

1) Enter SERVICE MODE : Press keys of User Remocon, as follows.
   Ch91, Sharpness 0, Skip(red), Move(green), Menu.
2) Choice SERVICE MENU : Pr-Up/Down
3) Enter SERVICE SUB MENU : Vol-Up/Down

CM-908/F CHASSIS SETTING LIST

NO	CH	PATTERN	BAND	V.FREQ.	Sound SYSTEM	Color SYSTEM	ADJUSTMENT
2	PAL H-2CH		VL	64.25	BG	PAL	
7	PAL H-7CH		VH	182.25	BG	PAL	
9	PAL H-9CH		VH	196.25	BG	PAL	
10	PAL H-10CH		VH	209.25	BG	PAL	
28	PAL H-28CH		U	527.25	BG	PAL	
30	PAL-40CH	W/B	U	623.25		AUTO	W/B
31	PAL-2CH	RETMA	VL	48.25	BG	AUTO	FOCUS, V-CENTER, V-SIZE,V-SLOPE H-CENTER,SCREEN
32	PAL-47CH	C/HATCH	U	679.25	I	AUTO	" CONVERGENCE, ADJUSTMENT"
33	PAL-10CH	COLOR BAR	VH	210.25	BG	PAL	" SCREEN, AGC"
34	PAL-4CH	DEM	VL	62.25	BG	PAL	" SOUND, Teletext check"
35	PAL-12CH	PHILIPS	VH	224.25	BG	SECAM	SECAM COLOR CHECK
36	PAL-18CH	RETMA	U	511.25	DK	AUTO	SOUND

6. ELECTRICAL PARTS LIST

Caution In this Manual, some parts can be changed for improving, their performance without notice in the parts list. So, if you need the latest parts information, please refer to PPL(Prats Price List) in Service information Center (http://svc.dwe.co.kr)

LOC	PART CODE	PART NAME	DESCRIPTION	REMARK
ZZ100	48B4844C07	TRANSMITTER REMOCON	R-44C07 (AA)	
ZZ110	PTACPWD703	ACCESSORY AS	DTC-29M5ME	
00030	4850Q00810	BATTERY	R6P/LN	
0200	48586054K1	MANUAL INSTRUCTION	DTM-2082CW	
M821	4858213801	BAG INSTRUCTION	L.D.P.E T0.05X250X400	
ZZ120	PTBCSHD703	COVER BACK AS	DTC-29M5ME	
M211	4852161121	COVER BACK	HIPS GY	
M781	4857817630	CLOTH BLACK	FELT 400X20X0.7	
ZZ130	PTPKCPD703	PACKING AS	DTC-29M5ME	
10	6520010100	STAPLE PIN	AUTO W65	
M801	4858057600	BOX CARTON	DW-3	
M811	4858199100	PAD	EPS 29M5	
M821	4858215601	BAG P.E	PE FOAM t0.5x1600x1270	
ZZ131	48519A6410	CRT GROUND NET	2902S-1015-1P	
ZZ132	58G0000149	COIL DEGAUSSING	DC-29SF	
ZZ140	PTCACAD908	CABINET AS	DTR-29M5ME	
M201A	4856015800	SCREW CRT FIX	L=27	
M201B	4856215402	WASHER RUBBER	CR T2.0	
M211A	7172401612	SCREW TAPPTITE	TT2 TRS 4X16 MFZN BK	
M211B	7172401612	SCREW TAPPTITE	TT2 TRS 4X16 MFZN BK	
M211C	7178301212	SCREW TAPPTITE	TT2 WAS 3X12 MFZN BK	
M231A	7172401612	SCREW TAPPTITE	TT2 TRS 4X16 MFZN BK	
M541	4855419800	SPEC PLATE	ART 150	
M682	4856816300	CLAMP WIRE	NYLON 6 (V0)	
M683	4856812001	TIE CABLE	NYLON66 DA100	
SP01A	7172401212	SCREW TAPPTITE	TT2 TRS 4X12 MFZNBK	
SP02A	7172401212	SCREW TAPPTITE	TT2 TRS 4X12 MFZNBK	
V901	4859626060	CRT	A68QBC230X09 P38	
ZZ200	PTFMSJD703	MASK FRONT AS	DTC-29M5ME	
M201	4852079701	MASK FRONT	HIPS GY	
M231A	7178301212	SCREW TAPPTITE	TT2 WAS 3X12 MFZN BK	
M561	48556174SD	MARK BRAND	SILVER DIA-CUTTING	
M781	4857821102	CLOTH BLACK	FELT 340X10X1.5	
ZZ205	PTPCSWJ912	PANEL CONTROL AS	DTQ-29M5	
M191	4851945700	BUTTON CTRL	4951401+5545800	
M191A	7178301011	SCREW TAPPTITE	TT2 WAS 3X10 MFZN	
M231	4852328201	PANEL DECO	ABS GY	
M481	4854861401	BUTTON POWER	ABS GY	
M481A	4856716000	SPRING	SWPA PIE0.5	
M591	4855933401	DECO EYE	ABS BLUE	
M591A	7178301011	SCREW TAPPTITE	TT2 WAS 3X10 MFZN	
ZZ210	PTSPPWD703	SPEAKER AS	DTC-29M5ME	
P601A	4850704S32	CONNECTOR	YH025-04+YRT205+ULW900500	
SP01	4858311110	SPEAKER	12W 8 OHM SP-58126F	
SP02	4858311110	SPEAKER	12W 8 OHM SP-58126F	
ZZ290	PTMPMSD908	PCB MAIN MANUAL AS	DTR-29M5ME	
10	2193102005	SOLDER BAR	SN:PB=63:47 S63S-1320	
30	2291050616	FLUX SOLDER	JS-64T3	
40	2291050301	FLUX SOLVENT	IM-1000	
C306	CEYF1E332V	C ELECTRO	25V RSS 3300MF (16X31.5)	
C310	CEYD1H689W	C ELECTRO	50V RHD 6.8MF (16X35.5)	
C405	CMYH3C123J	C MYLAR	1.6KV BUP 0.012MF J	
C406	CMYH3C722J	C MYLAR	1.6KV BUP 7200PF J	
C408	CMYE2D624J	C MYLAR	200V PU 0.62MF J	
C801	CL1UC3474M	C LINE ACROSS	0.47MF 1J(UCVSNDF/SV)+Q/O	
C804	CEYD2G221D	C ELECTRO	400V FHS 220MF (25X40)	
C811	CH1BFE472M	C CERA AC	AC400V 4700PF M U/C/V	
C817	CEYF2C221V	C ELECTRO	160V RSS 220MF (18X35.5)	
C831	CMYE2J473J	C MYLAR	630V PU 0.047MF J	
C839	CL1UC3474M	C LINE ACROSS	0.47MF 1J(UCVSNDF/SV)+Q/O	
D402	DRGP30J—-	DIODE	RGP30J DO-201AD 600V 3A	
D403	DDGP30L—-	DIODE	DGP30L	
D812	DRGP30J—-	DIODE	RGP30J DO-201AD 600V 3A	

LOC	PART CODE	PART NAME	DESCRIPTION	REMARK
D814	DHER308G—	DIODE	HER308G	
D820	DRL4A015—	DIODE	RL4A-015-308	
D821	DRL4A015—	DIODE	RL4A-015-308	
DC01	DLH2PR5MH3	LED HOLDER AS	LH-2P-R-5M-H3	
F801	5F3GB6322L	FUSE GLASS TUBE	V/S TL 6.3A 250V MF51	
I301	PTF2SW7921	HEAT SINK ASS`Y	1LA7848—- + 7174300811	
00001	1LA7848—-	IC VERTICAL	LA7848	
0000A	4857027921	HEAT SINK	AL EX BK	
0000B	7174300811	SCREW TAPPTITE	TT2 RND 3X8 MFZN	
I401	PT82SW6900	HEAT SINK ASS'Y	1K1A7809P1 + 7174300811	
00001	1K1A7809P1	IC REGULATOR	K1A7809API	
0000A	4857026900	HEAT SINK	AL EX	
0000B	7174300811	SCREW TAPPTITE	TT2 RND 3X8 MFZN	
I501	1V3834DW08	IC MICOM MCM	VCT3834F-DW08	
I601	1TDA7442—	IC AUDIO PROCESSOR	TDA7442	
I602	PTB2SW8228	HEAT SINK ASS`Y	1TDA8946J- + 7174301011	
00001	1TDA8946J-	IC AUDIO AMP	TDA8946J	
0000A	4857028228	HEAT SINK	AL EX BK	
0000B	7174301011	SCREW TAPPTITE	TT2 RND 3X10 MFZN	
I701	1CAT24C32P	IC MEMORY	CAT24WC32P	
I801	PTC2SW8209	HEAT SINK ASS`Y	1STRW6756- + 7174300811	
00001	1STRW6756-	IC POWER	STR-W6756	
0000A	4857028209	HEAT SINK	AL EX BK	
0000B	7174300811	SCREW TAPPTITE	TT2 RND 3X8 MFZN	
I802	1LTV817C—	IC PHOTO COUPLER	LTV-817C	
I804	PTN2SW6902	HEAT SINK ASS`Y	1K1A7805P1 + 7174300811	
00001	1K1A7805P1	IC REGULATOR	KIA7805API	
0000A	4857026902	HEAT SINK	AL EX BK	
0000B	7174300811	SCREW TAPPTITE	TT2 RND 3X8 MFZN	
I805	PTF2SW4902	HEAT SINK ASS`Y	1K78R05—- + 7174301011	
00001	1K78R05—-	IC REGULATOR	KIA78R05API	
0000A	4857024902	HEAT SINK	AL EX	
0000B	7174301011	SCREW TAPPTITE	TT2 RND 3X10 MFZN	
I806	1LP295033-	IC REGULATOR	LP2950 3.3V	
IF01	1356VF6—-	IC PREAMP	356VF6	
JV01	4859111750	JACK PIN BOARD	PH-JB-9515	
JV02	4859110950	JACK PIN BOARD	YS01-0001	
L301	58C7070085	COIL CHOKE	TLN-3062A	
L401	58H0000039	COIL H-LINEARITY	TRL-200D	
LF801	5PLF30A1—	FILTER LINE	LF-30A1	
LF802	58C0000144	COIL CHOKE PFC	CPC-161A	
M371	4853747800	RETA PCB	NYLON 66	
M372	4857252300	SHIELD CASE	SPTH T0.3	
P904	4859281320	CONN WAFER	TAC-L18X-A3	
PW801	4859903110	CORD POWER AS	KKP-419J-H03VVH2+H0U=2200	
A000	4859903511	CORD POWER	CW4232 H03VVH2-F=2250	
Q401	PTG2SW7609	HEAT SINK ASS`Y	TST2009DH1 + 7174300811	
00001	TST2009DH1	TR HORI	ST2009DHI	
0000A	4857027609	HEAT SINK	AL EX	
0000B	7174300811	SCREW TAPPTITE	TT2 RND 3X8 MFZN	
Q402	TKTC3229—	TR	KTC3229	
R801	DDC7R0M290	POSISTOR	ECPCD7R0M290	
R803	RX10T109KS	R CEMENT	10W 1 OHM K TRIPOD SMALL	
SW801	5S40101143	SW POWER PUSH	PS3-22SP (P.C.B)	
T401	50H0000251	FBT	FFA64039L	
T402	5TD0000018	TRANS DRIVE	THD-120	
T801	50M4445B4-	TRANS SMPS	TSM-4445B4	
U101	4859723730	TUNER VARACTOR	TMDG1-837	
X501	5XE20R250E	CRYSTAL QUARTZ	HC-49/U 20.2500MHZ 30PPM	
ZZ200	PTMPJ0D908	PCB MAIN (RHU) AS	DTR-29M5ME	
C105	CEXF1C222V	C ELECTRO	16V RSS 2200MF (16X31.5) TP	
C407	CMXE2G273J	C MYLAR	400V PU 0.027MF J (TP)	
C413	CEXF1E471V	C ELECTRO	25V RSS 470MF (10X16) TP	

LOC	PART CODE	PART NAME	DESCRIPTION	REMARK
C419	CEXF1C471V	C ELECTRO	16V RSS 470MF (8X12)TP	
C422	CEXF2C101V	C ELECTRO	160V RSS 100MF (16X25) TP	
C424	CEXF1V471V	C ELECTRO	35V RSS 470MF (10X20) TP	
C524	CEXF1C471V	C ELECTRO	16V RSS 470MF (8X12)TP	
C631	CEXF1E102V	C ELECTRO	25V RSS 1000MF (13X20) TP	
C802	CCXB3A472K	C CERA	1KV B 4700PF K (TAPPING)	
C803	CCXB3A472K	C CERA	1KV B 4700PF K (TAPPING)	
C806	CBXB3D471K	C CERA SEMI	2KV BL(N) 470PF K (T)	
C818	CEXF2C101V	C ELECTRO	160V RSS 100MF (16X25) TP	
C820	CEXF1E222V	C ELECTRO	25V RSS 2200MF (16X25) TP	
C821	CEXF1E222V	C ELECTRO	25V RSS 2200MF (16X25) TP	
C824	CMXB2G122J	C MYLAR	400V EU 1200PF J	
C835	CEXF1C471V	C ELECTRO	16V RSS 470MF (8X12)TP	
C837	CEXF1C471V	C ELECTRO	16V RSS 470MF (8X12)TP	
C838	CEXF1C102V	C ELECTRO	16V RSS 1000MF (10X20) TP	
ZZ200	PTMPJBD908	PCB MAIN M-10 AS	DTR-29M5ME	
10	2TM18006BE	TAPE MASKING	6.2X500	
E001	4856310600	EYE LET	BSR T0.2 (R2.3)	
E002	4856310600	EYE LET	BSR T0.2 (R2.3)	
E003	4856310600	EYE LET	BSR T0.2 (R2.3)	
E004	4856310600	EYE LET	BSR T0.2 (R2.3)	
E005	4856310300	EYE LET	BSR T0.2 (R1.6)	
E006	4856310300	EYE LET	BSR T0.2 (R1.6)	
E007	4856310300	EYE LET	BSR T0.2 (R1.6)	
E008	4856310300	EYE LET	BSR T0.2 (R1.6)	
E009	4856310300	EYE LET	BSR T0.2 (R1.6)	
E010	4856310300	EYE LET	BSR T0.2 (R1.6)	
E011	4856310300	EYE LET	BSR T0.2 (R1.6)	
E012	4856310600	EYE LET	BSR T0.2 (R2.3)	
E013	4856310600	EYE LET	BSR T0.2 (R2.3)	
E014	4856310300	EYE LET	BSR T0.2 (R1.6)	
E015	4856310300	EYE LET	BSR T0.2 (R1.6)	
E016	4856310300	EYE LET	BSR T0.2 (R1.6)	
E017	4856310300	EYE LET	BSR T0.2 (R1.6)	
E018	4856310300	EYE LET	BSR T0.2 (R1.6)	
E019	4856310300	EYE LET	BSR T0.2 (R1.6)	
E020	4856310300	EYE LET	BSR T0.2 (R1.6)	
E021	4856310600	EYE LET	BSR T0.2 (R2.3)	
E022	4856310600	EYE LET	BSR T0.2 (R2.3)	
E023	4856310600	EYE LET	BSR T0.2 (R2.3)	
E024	4856310600	EYE LET	BSR T0.2 (R2.3)	
E025	4856310300	EYE LET	BSR T0.2 (R1.6)	
E026	4856310300	EYE LET	BSR T0.2 (R1.6)	
E027	4856310300	EYE LET	BSR T0.2 (R1.6)	
E028	4856310300	EYE LET	BSR T0.2 (R1.6)	
E029	4856310300	EYE LET	BSR T0.2 (R1.6)	
E030	4856310300	EYE LET	BSR T0.2 (R1.6)	
E031	4856310300	EYE LET	BSR T0.2 (R1.6)	
E032	4856310300	EYE LET	BSR T0.2 (R1.6)	
E033	4856310300	EYE LET	BSR T0.2 (R1.6)	
E034	4856310300	EYE LET	BSR T0.2 (R1.6)	
E035	4856310300	EYE LET	BSR T0.2 (R1.6)	
E036	4856310600	EYE LET	BSR T0.2 (R2.3)	
E037	4856310600	EYE LET	BSR T0.2 (R2.3)	
E038	4856310600	EYE LET	BSR T0.2 (R2.3)	
E039	4856310600	EYE LET	BSR T0.2 (R2.3)	
E040	4856310600	EYE LET	BSR T0.2 (R2.3)	
E041	4856310600	EYE LET	BSR T0.2 (R2.3)	
E042	4856310600	EYE LET	BSR T0.2 (R2.3)	
E043	4856310600	EYE LET	BSR T0.2 (R2.3)	
E049	4856310600	EYE LET	BSR T0.2 (R2.3)	
E050	4856310600	EYE LET	BSR T0.2 (R2.3)	
E051	4856310600	EYE LET	BSR T0.2 (R2.3)	

LOC	PART CODE	PART NAME	DESCRIPTION	REMARK
E054	4856310600	EYE LET	BSR T0.2 (R2.3)	
E055	4856310600	EYE LET	BSR T0.2 (R2.3)	
E056	4856310600	EYE LET	BSR T0.2 (R2.3)	
E057	4856310600	EYE LET	BSR T0.2 (R2.3)	
E058	4856310600	EYE LET	BSR T0.2 (R2.3)	
E059	4856310600	EYE LET	BSR T0.2 (R2.3)	
E060	4856310300	EYE LET	BSR T0.2 (R1.6)	
E061	4856310300	EYE LET	BSR T0.2 (R1.6)	
E062	4856310300	EYE LET	BSR T0.2 (R1.6)	
E063	4856310600	EYE LET	BSR T0.2 (R2.3)	
E064	4856310600	EYE LET	BSR T0.2 (R2.3)	
E065	4856310600	EYE LET	BSR T0.2 (R2.3)	
E066	4856310600	EYE LET	BSR T0.2 (R2.3)	
E067	4856310600	EYE LET	BSR T0.2 (R2.3)	
E068	4856310600	EYE LET	BSR T0.2 (R2.3)	
N001	4857417500	TERM PIN	DA-IB0214(D2.3/DY PIN)	
N002	4857417500	TERM PIN	DA-IB0214(D2.3/DY PIN)	
N003	4857417500	TERM PIN	DA-IB0214(D2.3/DY PIN)	
N004	4857417500	TERM PIN	DA-IB0214(D2.3/DY PIN)	
N005	4857417500	TERM PIN	DA-IB0214(D2.3/DY PIN)	
N006	4857417500	TERM PIN	DA-IB0214(D2.3/DY PIN)	
N007	4857417500	TERM PIN	DA-IB0214(D2.3/DY PIN)	
N008	4857417500	TERM PIN	DA-IB0214(D2.3/DY PIN)	
P501	4859223202S	CONN WAFER	YW025-07 (STICK)	
P502	4859223172S	CONN WAFER	YW025-04 (STICK)	
P601	4859223172S	CONN WAFER	YW025-04 (STICK)	
P602	4859223182S	CONN WAFER	YW025-05 (STICK)	
P603	4859223192S	CONN WAFER	YW025-06 (STICK)	
P604	4859223162S	CONN WAFER	YW025-03 (STICK)	
PD01	4859223162S	CONN WAFER	YW025-03 (STICK)	
R105	RS02Z512JS	R M-OXIDE FILM	2W 5.1K OHM J SMALL	
R317	RS02Z100J-	R M-OXIDE FILM	2W 10 OHM J (TAPPING)	
R318	RS02Z271JS	R M-OXIDE FILM	2W 270 OHM J SMALL	
R403	RS01Z472J-	R M-OXIDE FILM	1W 4.7K OHM J (TAPPING)	
R406	RS02Z243JS	R M-OXIDE FILM	2W 24K OHM J SMALL	
R407	RS02Z102JS	R M-OXIDE FILM	2W 1K OHM J SMALL	
R410	RF01Z229J-	R FUSIBLE	1W 2.2 OHM J (TAPPING)	
R413	RF01Z100J-	R FUSIBLE	1W 10 OHM J (TAPPING)	
R414	RS02Z472JS	R M-OXIDE FILM	2W 4.7K OHM J SMALL	
R419	RF01Z229J-	R FUSIBLE	1W 2.2 OHM J (TAPPING)	
R807	RF02Z188K-	R FUSIBLE	2W 0.18 OHM K (TAPPING)	
R813	RF02Z398K-	R FUSIBLE	2W 0.39 OHM K (TAPPING)	
R830	RS02Z104J-	R M-OXIDE FILM	2W 100K OHM J TAPPING	
ZZ200	PTMPJRD908	PCB MAIN RADIAL AS	DTR-29M5ME	
C104	CEXF1H101V	C ELECTRO	50V RSS 100MF (8X11.5) TP	
C108	CEXF1H479V	C ELECTRO	50V RSS 4.7MF (5X11) TP	
C301	CMXM2A563J	C MYLAR	100V 0.056MF J (TP)	
C302	CMXM2A103J	C MYLAR	100V 0.01MF J (TP)	
C303	CXSL2H100D	C CERA	500V SL 10PF D (TAPPING)	
C304	CEXF1H100V	C ELECTRO	50V RSS 10MF (5X11) TP	
C305	CEXD1H109Q	C ELECTRO	50V RT 1MF (6.3X11) TP	
C307	CEXF1H101V	C ELECTRO	50V RSS 100MF (8X11.5) TP	
C309	CEXF1H100V	C ELECTRO	50V RSS 10MF (5X11) TP	
C311	CEXF1H479V	C ELECTRO	50V RSS 4.7MF (5X11) TP	
C312	CCXB2H561K	C CERA	500V B 560PF K (TAPPING)	
C313	CEXF1C101V	C ELECTRO	16V RSS 100MF (6.3X11) TP	
C314	CMXM2A332J	C MYLAR	100V 3300PF J (TP)	
C315	CEXF1H101V	C ELECTRO	50V RSS 100MF (8X11.5) TP	
C320	CMXM2A104J	C MYLAR	100V 0.1MF J (TP)	
C321	CMXM2A123J	C MYLAR	100V 0.012MF J (TP)	
C402	CCXB2H102K	C CERA	500V B 1000PF K (TAPPING)	
C403	CCXB2H222K	C CERA	500V B 2200PF K (TAPPING)	
C404	CCXB2H471K	C CERA	500V B 470PF K (TAPPING)	

ELECTRICAL PARTS LIST

LOC	PART CODE	PART NAME	DESCRIPTION	REMARK
C409	CEXF2C339V	C ELECTRO	160V RSS 3.3MF (8X16) TP	
C410	CCXB2H561K	C CERA	500V B 560PF K (TAPPING)	
C411	CEXF2E229V	C ELECTRO	250V RSS 2.2MF (8X11.5)TP	
C415	CEXF1H470V	C ELECTRO	50V RSS 47MF (6.3X11) TP	
C417	CMXM2A104J	C MYLAR	100V 0.1MF J (TP)	
C421	CMXM2A333J	C MYLAR	100V 0.033MF J (TP)	
C425	CCXB2H102K	C CERA	500V B 1000PF K (TAPPING)	
C426	CMXM2A104J	C MYLAR	100V 0.1MF J (TP)	
C502	CEXF1C221V	C ELECTRO	16V RSS 220MF (8X11.5) TP	
C503	CEXF1H100V	C ELECTRO	50V RSS 10MF (5X11) TP	
C505	CEXF1H470V	C ELECTRO	50V RSS 47MF (6.3X11) TP	
C507	CEXF1H109V	C ELECTRO	50V RSS 1MF (5X11) TP	
C508	CEXF1H109V	C ELECTRO	50V RSS 1MF (5X11) TP	
C509	CEXF1H478V	C ELECTRO	50V RSS 0.47MF (5X11) TP	
C510	CEXF1H478V	C ELECTRO	50V RSS 0.47MF (5X11) TP	
C511	CEXF1H478V	C ELECTRO	50V RSS 0.47MF (5X11) TP	
C512	CEXF1H478V	C ELECTRO	50V RSS 0.47MF (5X11) TP	
C514	CEXF1H470V	C ELECTRO	50V RSS 47MF (6.3X11) TP	
C518	CEXF1H470V	C ELECTRO	50V RSS 47MF (6.3X11) TP	
C519	CMXL1J683J	C MYLAR	63V MEU 0.068MF J	
C521	CEXF1H229V	C ELECTRO	50V RSS 2.2MF (5X11) TP	
C522	CEXF1H479V	C ELECTRO	50V RSS 4.7MF (5X11) TP	
C525	CEXF1H100V	C ELECTRO	50V RSS 10MF (5X11) TP	
C530	CEXF1H479V	C ELECTRO	50V RSS 4.7MF (5X11) TP	
C542	CEXF1H470V	C ELECTRO	50V RSS 47MF (6.3X11) TP	
C544	CEXF1H470V	C ELECTRO	50V RSS 47MF (6.3X11) TP	
C545	CEXF1H339V	C ELECTRO	50V RSS 3.3MF (5X11) TP	
C548	CEXF1C221V	C ELECTRO	16V RSS 220MF (8X11.5) TP	
C550	CEXF1H220V	C ELECTRO	50V RSS 22MF (5X11) TP	
C551	CEXF1C101V	C ELECTRO	16V RSS 100MF (6.3X11) TP	
C562	CEXF1H100V	C ELECTRO	50V RSS 10MF (5X11) TP	
C581	CEXF1H100V	C ELECTRO	50V RSS 10MF (5X11) TP	
C582	CEXF1H470V	C ELECTRO	50V RSS 47MF (6.3X11) TP	
C583	CEXF1H100V	C ELECTRO	50V RSS 10MF (5X11) TP	
C585	CEXF1H470V	C ELECTRO	50V RSS 47MF (6.3X11) TP	
C601	CEXF1H478V	C ELECTRO	50V RSS 0.47MF (5X11) TP	
C606	CEXF1H470V	C ELECTRO	50V RSS 47MF (6.3X11) TP	
C608	CEXF1H478V	C ELECTRO	50V RSS 0.47MF (5X11) TP	
C609	CEXF1H478V	C ELECTRO	50V RSS 0.47MF (5X11) TP	
C610	CEXF1H478V	C ELECTRO	50V RSS 0.47MF (5X11) TP	
C611	CEXF1H479V	C ELECTRO	50V RSS 4.7MF (5X11) TP	
C612	CEXF1H479V	C ELECTRO	50V RSS 4.7MF (5X11) TP	
C617	CCXB1H682K	C CERA	50V B 6800PF K (TAPPING)	
C618	CCXB1H682K	C CERA	50V B 6800PF K (TAPPING)	
C619	CEXF1H100V	C ELECTRO	50V RSS 10MF (5X11) TP	
C622	CEXF1H478V	C ELECTRO	50V RSS 0.47MF (5X11) TP	
C623	CEXF1H478V	C ELECTRO	50V RSS 0.47MF (5X11) TP	
C624	CMXL1J224J	C MYLAR	63V MEU 0.22MF J (TP)	
C625	CEXF1H100V	C ELECTRO	50V RSS 10MF (5X11) TP	
C626	CEXF1H339V	C ELECTRO	50V RSS 3.3MF (5X11) TP	
C627	CMXL1J224J	C MYLAR	63V MEU 0.22MF J (TP)	
C628	CMXL1J224J	C MYLAR	63V MEU 0.22MF J (TP)	
C629	CMXL1J224J	C MYLAR	63V MEU 0.22MF J (TP)	
C633	CMXM2A682J	C MYLAR	100V 6800PF J (TP)	
C634	CMXM2A682J	C MYLAR	100V 6800PF J (TP)	
C805	CEXF1H100V	C ELECTRO	50V RSS 10MF (5X11) TP	
C807	CCXB1H821K	C CERA	50V B 820PF K (TAPPING)	
C808	CCXB1H471K	C CERA	50V B 470PF K (TAPPING)	
C810	CEXF1H109V	C ELECTRO	50V RSS 1MF (5X11) TP	
C812	CCXB3A471K	C CERA	1KV B 470PF K (T)	
C814	CCXB3A271K	C CERA	1KV B 270PF K (TAPPING)	
C819	CEXF2A100V	C ELECTRO	100V RSS 10MF (6.3X11) TP	
C822	CMXB2A102J	C MYLAR	100V EU 1000PF J (TP)	

LOC	PART CODE	PART NAME	DESCRIPTION	REMARK
C825	CCXF1H473Z	C CERA	50V F 0.047MF Z (TAPPING)	
C826	CEXF1H220V	C ELECTRO	50V RSS 22MF (5X11) TP	
C827	CEXF1H479V	C ELECTRO	50V RSS 4.7MF (5X11) TP	
C828	CEXF1C101V	C ELECTRO	16V RSS 100MF (6.3X11) TP	
C833	CEXF1C101V	C ELECTRO	16V RSS 100MF (6.3X11) TP	
C836	CMXM2A104J	C MYLAR	100V 0.1MF J (TP)	
F801A	4857415001	CLIP FUSE	PFC5000-0702	
F801B	4857415001	CLIP FUSE	PFC5000-0702	
I702	1K1A7025AP	IC RESET	KIA7025AP	
I803	1KA431L—-	IC	KA431L 0.5% TO-92	
L601	58CX430599	COIL CHOKE	AZ-9004Y 940K TP	
L812	58CX430599	COIL CHOKE	AZ-9004Y 940K TP	
Q101	TKTC3198Y-	TR	KTC3198Y	
Q301	TKTC3198Y-	TR	KTC3198Y	
Q403	TKTC3198Y-	TR	KTC3198Y	
Q502	TKTA1266Y-	TR	KTA1266Y (TP)	
Q503	TKTA1266Y-	TR	KTA1266Y (TP)	
Q504	TKTA1266Y-	TR	KTA1266Y (TP)	
Q505	TKTC3198Y-	TR	KTC3198Y	
Q507	TKTA1266Y-	TR	KTA1266Y (TP)	
Q508	TKTC3198Y-	TR	KTC3198Y	
Q509	TKTC3198Y-	TR	KTC3198Y	
Q512	TKSC2330Y-	TR	KSC2330Y (TP)	
Q513	TKSC2330Y-	TR	KSC2330Y (TP)	
Q514	TKTC3198Y-	TR	KTC3198Y	
Q581	TKTC3198Y-	TR	KTC3198Y	
Q582	TKTC3198Y-	TR	KTC3198Y	
Q583	TKTC3198Y-	TR	KTC3198Y	
Q601	TKTC3198Y-	TR	KTC3198Y	
Q602	TKTC3198Y-	TR	KTC3198Y	
Q801	TKSA1013Y-	TR	KSA1013Y (TP)	
Q852	TKTC3198Y-	TR	KTC3198Y	
Q853	TKTC3198Y-	TR	KTC3198Y	
QF01	TKTC3198Y-	TR	KTC3198Y	
R111	RN02B200JS	R METAL FILM	2W 20 OHM J SMALL	
R308	RN02B271JS	R METAL FILM	2W 270 OHM J SMALL	
R309	RN02B121JS	R METAL FILM	2W 120 OHM J SMALL	
R310	RN02B200JS	R METAL FILM	2W 20 OHM J SMALL	
R312	RN01B913JS	R METAL FILM	1W 91K OHM J SMALL	
R314	RN02B103JS	R METAL FILM	2W 10K OHM J SMALL	
R315	RN01B562JS	R METAL FILM	1W 5.6K OHM J SMALL	
R404	RN02B680JS	R METAL FILM	2W 68 OHM J SMALL	
R420	RN02B101JS	R METAL FILM	2W 100 OHM J SMALL	
R422	RN02B100JS	R METAL FILM	2W 10 OHM J SMALL	
R426	RN02B333JS	R METAL FILM	2W 33K OHM J SMALL	
R429	RN02B681JS	R METAL FILM	2W 680 OHM J SMALL	
R828	RN02B132JS	R METAL FILM	2W 1.3K OHM J SMALL	
SW701	5S50101090	SW TACT	THVH472GCA	
SW702	5S50101090	SW TACT	THVH472GCA	
SW703	5S50101090	SW TACT	THVH472GCA	
SW704	5S50101090	SW TACT	THVH472GCA	
SW705	5S50101090	SW TACT	THVH472GCA	
SW706	5S50101090	SW TACT	THVH472GCA	
ZA01	5PXF1B471M	FILTER EMI	CFI 06 B 1H 470PF	
ZA02	5PXF1B471M	FILTER EMI	CFI 06 B 1H 470PF	
ZA03	5PXF1B471M	FILTER EMI	CFI 06 B 1H 470PF	
ZA04	5PXF1B471M	FILTER EMI	CFI 06 B 1H 470PF	
ZA05	5PXF1B471M	FILTER EMI	CFI 06 B 1H 470PF	
ZA06	5PXF1B471M	FILTER EMI	CFI 06 B 1H 470PF	
ZA07	5PXF1B471M	FILTER EMI	CFI 06 B 1H 470PF	
ZA08	5PXF1B471M	FILTER EMI	CFI 06 B 1H 470PF	
ZZ200	PTMPJAD908	PCB MAIN AXIAL AS	DTR-29M5ME	
10	2TM14006LB	TAPE MASKING	3M #232 6.0X2000M	

LOC	PART CODE	PART NAME	DESCRIPTION	REMARK
20	2TM10006LB	TAPE MASKING	3M #232-MAP-C 6.2X2000M	
A001	4859808993	PCB MAIN	330X246 1.6T	
C103	CCZB1H102K	C CERA	50V B 1000PF K (AXIAL)	
C308	CZCH1H200J	C CERA	50V CH 20PF J (AXIAL)	
C501	CBZF1H104Z	C CERA SEMI	50V F 0.1MF Z	
C504	CCZF1H473Z	C CERA	50V F 0.047MF Z	
C506	CBZF1H104Z	C CERA SEMI	50V F 0.1MF Z	
C513	CCZF1H103Z	C CERA	50V F 0.01MF Z	
C515	CCZF1H223Z	C CERA	50V F 0.022MF Z	
C516	CCZF1H223Z	C CERA	50V F 0.022MF Z	
C517	CCZF1H223Z	C CERA	50V F 0.022MF Z	
C520	CCZB1H151K	C CERA	50V B 150PF K (AXIAL)	
C523	CBZF1H104Z	C CERA SEMI	50V F 0.1MF Z	
C526	CBZF1H104Z	C CERA SEMI	50V F 0.1MF Z	
C527	CZCH1H309C	C CERA	50V CH 3PF C (AXIAL)	
C528	CZCH1H309C	C CERA	50V CH 3PF C (AXIAL)	
C529	CCZB1H221K	C CERA	50V B 220PF K (AXIAL)	
C531	CBZF1H104Z	C CERA SEMI	50V F 0.1MF Z	
C532	CCZB1H221K	C CERA	50V B 220PF K (AXIAL)	
C534	CCZF1H103Z	C CERA	50V F 0.01MF Z	
C538	CCZB1H221K	C CERA	50V B 220PF K (AXIAL)	
C539	CCZB1H221K	C CERA	50V B 220PF K (AXIAL)	
C540	CCZB1H221K	C CERA	50V B 220PF K (AXIAL)	
C543	CBZF1H104Z	C CERA SEMI	50V F 0.1MF Z	
C546	CBZF1H104Z	C CERA SEMI	50V F 0.1MF Z	
C566	CCZB1H221K	C CERA	50V B 220PF K (AXIAL)	
C577	CCZB1H221K	C CERA	50V B 220PF K (AXIAL)	
C584	CCZF1H473Z	C CERA	50V F 0.047MF Z	
C586	CCZF1H473Z	C CERA	50V F 0.047MF Z	
C599	CCZB1H221K	C CERA	50V B 220PF K (AXIAL)	
C602	CBZF1H104Z	C CERA SEMI	50V F 0.1MF Z	
C603	CBZF1H104Z	C CERA SEMI	50V F 0.1MF Z	
C604	CBZF1H104Z	C CERA SEMI	50V F 0.1MF Z	
C605	CBZF1H104Z	C CERA SEMI	50V F 0.1MF Z	
C607	CBZF1H104Z	C CERA SEMI	50V F 0.1MF Z	
C613	CBZF1H104Z	C CERA SEMI	50V F 0.1MF Z	
C614	CBZF1H104Z	C CERA SEMI	50V F 0.1MF Z	
C615	CBZR1C152M	C CERA	16V Y5R 1500PF M (AXIAL)	
C616	CBZF1H104Z	C CERA SEMI	50V F 0.1MF Z	
C630	CBZF1H104Z	C CERA SEMI	50V F 0.1MF Z	
C642	CBZF1H104Z	C CERA SEMI	50V F 0.1MF Z	
C643	CBZF1H104Z	C CERA SEMI	50V F 0.1MF Z	
C823	CCZF1H103Z	C CERA	50V F 0.01MF Z	
C830	CCZF1H103Z	C CERA	50V F 0.01MF Z	
C832	CBZF1H104Z	C CERA SEMI	50V F 0.1MF Z	
C834	CBZF1H104Z	C CERA SEMI	50V F 0.1MF Z	
D101	DUZ33B—-	DIODE ZENER	UZ-33B	
D102	DUZ5R6BM—	DIODE ZENER	UZ-5.6BM	
D301	D1N4004S—	DIODE	1N4004S	
D304	DUZ33B—-	DIODE ZENER	UZ-33B	
D306	D1N4004S—	DIODE	1N4004S	
D307	D1N4004S—	DIODE	1N4004S	
D401	D1N4937G—	DIODE	1N4937G (TAPPING)	
D405	DUZ9R1BM—	DIODE ZENER	UZ-9.1BM	
D406	D1N4937G—	DIODE	1N4937G (TAPPING)	
D407	D1N4937G—	DIODE	1N4937G (TAPPING)	
D410	D1N4937G—	DIODE	1N4937G (TAPPING)	
D411	DUZ12BM—-	DIODE ZENER	UZ-12BM (UNIZON)	
D412	D1N4148—-	DIODE	1N4148 (TAPPING)	
D501	D1N4148—-	DIODE	1N4148 (TAPPING)	
D502	D1N4148—-	DIODE	1N4148 (TAPPING)	
D503	DUZ5R1B—-	DIODE ZENER	UZ-5.1B	
D504	DUZ5R1B—-	DIODE ZENER	UZ-5.1B	
D505	DUZ5R1B—-	DIODE ZENER	UZ-5.1B	
D506	D1N4148—-	DIODE	1N4148 (TAPPING)	
D507	D1N4148—-	DIODE	1N4148 (TAPPING)	
D508	D1N4148—-	DIODE	1N4148 (TAPPING)	
D509	DUZ2R7B—-	DIODE ZENER	UZ-2.7B	
D511	DUZ7R5BM—	DIODE ZENER	UZ-7.5BM	
D512	DUZ7R5BM—	DIODE ZENER	UZ-7.5BM	
D513	DUZ7R5BM—	DIODE ZENER	UZ-7.5BM	
D515	DUZ5R6BM—	DIODE ZENER	UZ-5.6BM	
D516	D1N4148—-	DIODE	1N4148 (TAPPING)	
D581	DUZ5R6BM—	DIODE ZENER	UZ-5.6BM	
D585	DUZ5R6BM—	DIODE ZENER	UZ-5.6BM	
D586	DUZ5R6BM—	DIODE ZENER	UZ-5.6BM	
D587	DUZ5R6BM—	DIODE ZENER	UZ-5.6BM	
D588	DUZ5R6BM—	DIODE ZENER	UZ-5.6BM	
D589	DUZ5R6BM—	DIODE ZENER	UZ-5.6BM	
D590	DUZ5R6BM—	DIODE ZENER	UZ-5.6BM	
D591	DUZ5R6BM—	DIODE ZENER	UZ-5.6BM	
D592	DUZ5R6BM—	DIODE ZENER	UZ-5.6BM	
D593	DUZ5R6BM—	DIODE ZENER	UZ-5.6BM	
D594	DUZ5R6BM—	DIODE ZENER	UZ-5.6BM	
D601	D1N4148—-	DIODE	1N4148 (TAPPING)	
D602	D1N4148—-	DIODE	1N4148 (TAPPING)	
D802	DLT2A05G—	DIODE	LT2A05G (TP)	
D803	DLT2A05G—	DIODE	LT2A05G (TP)	
D804	DLT2A05G—	DIODE	LT2A05G (TP)	
D805	DLT2A05G—	DIODE	LT2A05G (TP)	
D807	D1N4937G—	DIODE	1N4937G (TAPPING)	
D808	D1N4937G—	DIODE	1N4937G (TAPPING)	
D810	D1N4004S—	DIODE	1N4004S	
D811	DUZ3R3B—-	DIODE ZENER	UZ-3.3B	
D813	D1N4937G—	DIODE	1N4937G (TAPPING)	
D815	DRGP15J—-	DIODE	RGP15J DO-204AC 600V 1.5A	
D816	DRGP15J—-	DIODE	RGP15J DO-204AC 600V 1.5A	
D817	D1N4937G—	DIODE	1N4937G (TAPPING)	
D822	DUZ6R2BM—	DIODE ZENER	UZ-6.2BM	
D899	DUZ5R1B—-	DIODE ZENER	UZ-5.1B	
DF01	DUZ5R6BM—	DIODE ZENER	UZ-5.6BM	
DF02	DUZ5R6BM—	DIODE ZENER	UZ-5.6BM	
J001	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING	
J002	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING	
J003	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING	
J004	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING	
J005	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING	
J007	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING	
J008	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING	
J009	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING	
J010	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING	
J011	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING	
J012	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING	
J013	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING	
J014	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING	
J015	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING	
J016	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING	
J017	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING	
J018	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING	
J019	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING	
J020	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING	
J021	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING	
J022	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING	
J023	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING	
J024	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING	
J025	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING	

ELECTRICAL PARTS LIST

LOC	PART CODE	PART NAME	DESCRIPTION	REMARK
J026	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING	
J027	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING	
J028	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING	
J029	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING	
J030	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING	
J031	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING	
J033	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING	
J034	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING	
J035	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING	
J036	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING	
J037	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING	
J038	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING	
J039	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING	
J041	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING	
J042	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING	
J043	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING	
J045	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING	
J046	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING	
J048	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING	
J049	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING	
J050	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING	
J051	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING	
J052	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING	
J053	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING	
J054	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING	
J055	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING	
J056	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING	
J057	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING	
J058	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING	
J059	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING	
J060	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING	
J061	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING	
J062	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING	
J063	5CPZ479K02	COIL PEAKING	4.7UH K (AXIAL 3.5MM)	
J064	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING	
J065	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING	
J066	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING	
J067	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING	
J068	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING	
J069	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING	
J070	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING	
J071	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING	
J072	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING	
J073	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING	
J074	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING	
J075	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING	
J076	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING	
J077	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING	
J078	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING	
J079	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING	
J080	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING	
J081	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING	
J082	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING	
J083	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING	
J085	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING	
J086	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING	
J087	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING	
J088	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING	
J089	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING	
J090	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING	
J091	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING	
J092	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING	
J093	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING	

LOC	PART CODE	PART NAME	DESCRIPTION	REMARK
J094	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING	
J095	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING	
J096	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING	
J097	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING	
J098	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING	
J100	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING	
J101	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING	
J102	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING	
J103	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING	
J104	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING	
J105	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING	
J106	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING	
J108	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING	
J109	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING	
J110	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING	
J111	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING	
J112	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING	
J113	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING	
J114	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING	
J115	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING	
J116	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING	
J118	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING	
J119	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING	
J120	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING	
J121	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING	
J122	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING	
J123	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING	
J124	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING	
J125	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING	
J126	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING	
J127	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING	
J128	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING	
J129	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING	
J130	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING	
J131	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING	
J132	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING	
J133	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING	
J134	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING	
J135	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING	
J136	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING	
J137	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING	
J138	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING	
J139	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING	
J140	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING	
J141	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING	
J142	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING	
J143	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING	
J144	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING	
J146	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING	
J147	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING	
L101	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING	
L404	58C0000026	COIL BEAD	HC-4035	
L405	5CPZ109M02	COIL PEAKING	1UH M (AXIAL 3.5MM)	
L501	5CPZ101K02	COIL PEAKING	100UH K (AXIAL 3.5MM)	
L502	5CPZ220K02	COIL PEAKING	22UH K (AXIAL 3.5MM)	
L503	5CPZ479K02	COIL PEAKING	4.7UH K (AXIAL 3.5MM)	
L504	5CPZ220K02	COIL PEAKING	22UH K (AXIAL 3.5MM)	
L505	5CPZ479K02	COIL PEAKING	4.7UH K (AXIAL 3.5MM)	
L506	5CPZ101K02	COIL PEAKING	100UH K (AXIAL 3.5MM)	
L507	5CPZ100K02	COIL PEAKING	10UH K (AXIAL 3.5MM)	
L566	5CPZ479K02	COIL PEAKING	4.7UH K (AXIAL 3.5MM)	
L577	5CPZ479K02	COIL PEAKING	4.7UH K (AXIAL 3.5MM)	
L581	5CPZ470K02	COIL PEAKING	47UH K (AXIAL 3.5MM)	

LOC	PART CODE	PART NAME	DESCRIPTION	REMARK
L582	5CPZ100K02	COIL PEAKING	10UH K (AXIAL 3.5MM)	
L599	5CPZ479K02	COIL PEAKING	4.7UH K (AXIAL 3.5MM)	
L602	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING	
L801	5MC0000100	COIL BEAD	HC-3550	
R103	RD-AZ472J-	R CARBON FILM	1/6 4.7K OHM J	
R107	RD-AZ101J-	R CARBON FILM	1/6 100 OHM J	
R108	RD-AZ101J-	R CARBON FILM	1/6 100 OHM J	
R109	RD-AZ272J-	R CARBON FILM	1/6 2.7K OHM J	
R110	RD-AZ471J-	R CARBON FILM	1/6 470 OHM J	
R301	RN-AZ3601F	R METAL FILM	1/6 3.60K OHM F	
R302	RN-4Z2002F	R METAL FILM	1/4 20.0K OHM F	
R303	RN-4Z1003F	R METAL FILM	1/4 100K OHM F	
R304	RN-4Z1102F	R METAL FILM	1/4 11K OHM F	
R305	RD-AZ562J-	R CARBON FILM	1/6 5.6K OHM J	
R306	RD-AZ563J-	R CARBON FILM	1/6 56K OHM J	
R307	RD-AZ113J-	R CARBON FILM	1/6 11K OHM J	
R311	RD-AZ473J-	R CARBON FILM	1/6 47K OHM J	
R313	RD-4Z103J-	R CARBON FILM	1/4 10K OHM J	
R316	RD-4Z101J-	R CARBON FILM	1/4 100 OHM J	
R319	RD-AZ101J-	R CARBON FILM	1/6 100 OHM J	
R320	RD-AZ479J-	R CARBON FILM	1/6 4.7 OHM J	
R321	RD-AZ103J-	R CARBON FILM	1/6 10K OHM J	
R322	RD-AZ102J-	R CARBON FILM	1/6 1K OHM J	
R323	RD-4Z101J-	R CARBON FILM	1/4 100 OHM J	
R324	RD-2Z109J-	R CARBON FILM	1/2 1 OHM J	
R326	RD-AZ391J-	R CARBON FILM	1/6 390 OHM J	
R327	RN-4Z2701F	R METAL FILM	1/4 2.70K OHM F	
R328	RN-AZ3301F	R METAL FILM	1/6 3.3K OHM F	
R401	RD-4Z121J-	R CARBON FILM	1/4 120 OHM J	
R402	RD-4Z122J-	R CARBON FILM	1/4 1.2K OHM J	
R405	RD-4Z330J-	R CARBON FILM	1/4 33 OHM J	
R408	RD-AZ102J-	R CARBON FILM	1/6 1K OHM J	
R409	RD-4Z512J-	R CARBON FILM	1/4 5.1K OHM J	
R411	RD-AZ103J-	R CARBON FILM	1/6 10K OHM J	
R412	RD-AZ102J-	R CARBON FILM	1/6 1K OHM J	
R418	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING	
R421	RD-4Z914J-	R CARBON FILM	1/4 910K OHM J	
R424	RD-4Z101J-	R CARBON FILM	1/4 100 OHM J	
R501	RD-AZ472J-	R CARBON FILM	1/6 4.7K OHM J	
R502	RD-AZ101J-	R CARBON FILM	1/6 100 OHM J	
R503	RD-AZ203J-	R CARBON FILM	1/6 20K OHM J	
R504	RD-AZ101J-	R CARBON FILM	1/6 100 OHM J	
R505	RD-AZ103J-	R CARBON FILM	1/6 10K OHM J	
R506	RD-AZ223J-	R CARBON FILM	1/6 22K OHM J	
R507	RD-AZ102J-	R CARBON FILM	1/6 1K OHM J	
R510	RD-AZ912J-	R CARBON FILM	1/6 9.1K OHM J	
R511	RD-AZ511J-	R CARBON FILM	1/6 510 OHM J	
R512	RD-AZ122J-	R CARBON FILM	1/6 1.2K OHM J	
R513	RD-AZ223J-	R CARBON FILM	1/6 22K OHM J	
R514	RD-AZ271J-	R CARBON FILM	1/6 270 OHM J	
R515	RD-AZ222J-	R CARBON FILM	1/6 2.2K OHM J	
R516	RD-AZ101J-	R CARBON FILM	1/6 100 OHM J	
R517	RD-AZ181J-	R CARBON FILM	1/6 180 OHM J	
R518	RD-AZ181J-	R CARBON FILM	1/6 180 OHM J	
R519	RD-AZ181J-	R CARBON FILM	1/6 180 OHM J	
R520	RD-AZ103J-	R CARBON FILM	1/6 10K OHM J	
R521	RD-AZ101J-	R CARBON FILM	1/6 100 OHM J	
R522	RD-AZ101J-	R CARBON FILM	1/6 100 OHM J	
R523	RD-AZ152J-	R CARBON FILM	1/6 1.5K OHM J	
R524	RD-AZ152J-	R CARBON FILM	1/6 1.5K OHM J	
R525	RD-AZ332J-	R CARBON FILM	1/6 3.3K OHM J	
R526	RD-AZ101J-	R CARBON FILM	1/6 100 OHM J	
R527	RD-AZ103J-	R CARBON FILM	1/6 10K OHM J	

LOC	PART CODE	PART NAME	DESCRIPTION	REMARK
R528	RD-AZ473J-	R CARBON FILM	1/6 47K OHM J	
R529	RD-AZ103J-	R CARBON FILM	1/6 10K OHM J	
R532	RD-AZ223J-	R CARBON FILM	1/6 22K OHM J	
R533	RD-AZ271J-	R CARBON FILM	1/6 270 OHM J	
R534	RD-AZ101J-	R CARBON FILM	1/6 100 OHM J	
R535	RD-AZ223J-	R CARBON FILM	1/6 22K OHM J	
R536	RD-AZ271J-	R CARBON FILM	1/6 270 OHM J	
R537	RD-AZ101J-	R CARBON FILM	1/6 100 OHM J	
R538	RD-AZ223J-	R CARBON FILM	1/6 22K OHM J	
R539	RD-AZ271J-	R CARBON FILM	1/6 270 OHM J	
R540	RD-AZ101J-	R CARBON FILM	1/6 100 OHM J	
R541	RD-AZ330J-	R CARBON FILM	1/6 33 OHM J	
R542	RD-AZ330J-	R CARBON FILM	1/6 33 OHM J	
R543	RD-AZ330J-	R CARBON FILM	1/6 33 OHM J	
R544	RD-AZ220J-	R CARBON FILM	1/6 22 OHM J	
R545	RD-AZ102J-	R CARBON FILM	1/6 1K OHM J	
R546	RD-AZ101J-	R CARBON FILM	1/6 100 OHM J	
R547	RD-AZ222J-	R CARBON FILM	1/6 2.2K OHM J	
R548	RD-AZ682J-	R CARBON FILM	1/6 6.8K OHM J	
R549	RD-AZ222J-	R CARBON FILM	1/6 2.2K OHM J	
R550	RD-AZ102J-	R CARBON FILM	1/6 1K OHM J	
R551	RD-AZ201J-	R CARBON FILM	1/6 200 OHM J	
R552	RD-2Z100J-	R CARBON FILM	1/2 10 OHM J	
R556	RD-AZ513J-	R CARBON FILM	1/6 51K OHM J	
R559	RD-AZ243J-	R CARBON FILM	1/6 24K OHM J	
R560	RD-AZ472J-	R CARBON FILM	1/6 4.7K OHM J	
R561	RD-4Z103J-	R CARBON FILM	1/4 10K OHM J	
R564	RD-AZ682J-	R CARBON FILM	1/6 6.8K OHM J	
R566	RD-AZ330J-	R CARBON FILM	1/6 33 OHM J	
R570	RD-2Z101J-	R CARBON FILM	1/2 100 OHM J	
R573	RD-AZ100J-	R CARBON FILM	1/6 10 OHM J	
R574	RD-AZ472J-	R CARBON FILM	1/6 4.7K OHM J	
R577	RD-AZ330J-	R CARBON FILM	1/6 33 OHM J	
R581	RD-AZ750J-	R CARBON FILM	1/6 75 OHM J	
R582	RD-AZ683J-	R CARBON FILM	1/6 68K OHM J	
R583	RD-AZ683J-	R CARBON FILM	1/6 68K OHM J	
R584	RD-AZ473J-	R CARBON FILM	1/6 47K OHM J	
R585	RD-AZ101J-	R CARBON FILM	1/6 100 OHM J	
R586	RD-AZ750J-	R CARBON FILM	1/6 75 OHM J	
R587	RD-AZ473J-	R CARBON FILM	1/6 47K OHM J	
R588	RD-AZ473J-	R CARBON FILM	1/6 47K OHM J	
R589	RD-AZ473J-	R CARBON FILM	1/6 47K OHM J	
R590	RD-AZ101J-	R CARBON FILM	1/6 100 OHM J	
R591	RD-AZ750J-	R CARBON FILM	1/6 75 OHM J	
R592	RD-AZ829J-	R CARBON FILM	1/6 8.2 OHM J	
R593	RD-AZ473J-	R CARBON FILM	1/6 47K OHM J	
R594	RD-AZ473J-	R CARBON FILM	1/6 47K OHM J	
R595	RD-AZ101J-	R CARBON FILM	1/6 100 OHM J	
R596	RD-AZ750J-	R CARBON FILM	1/6 75 OHM J	
R597	RD-AZ750J-	R CARBON FILM	1/6 75 OHM J	
R598	RD-AZ102J-	R CARBON FILM	1/6 1K OHM J	
R599	RD-AZ330J-	R CARBON FILM	1/6 33 OHM J	
R603	RD-AZ101J-	R CARBON FILM	1/6 100 OHM J	
R604	RD-AZ101J-	R CARBON FILM	1/6 100 OHM J	
R605	RD-AZ153J-	R CARBON FILM	1/6 15K OHM J	
R606	RD-AZ562J-	R CARBON FILM	1/6 5.6K OHM J	
R607	RD-AZ562J-	R CARBON FILM	1/6 5.6K OHM J	
R608	RD-AZ101J-	R CARBON FILM	1/6 100 OHM J	
R609	RD-AZ331J-	R CARBON FILM	1/6 330 OHM J	
R610	RD-AZ682J-	R CARBON FILM	1/6 6.8K OHM J	
R611	RD-AZ682J-	R CARBON FILM	1/6 6.8K OHM J	
R612	RD-AZ392J-	R CARBON FILM	1/6 3.9K OHM J	
R613	RD-AZ392J-	R CARBON FILM	1/6 3.9K OHM J	

ELECTRICAL PARTS LIST

LOC	PART CODE	PART NAME	DESCRIPTION	REMARK
R614	RD-AZ203J-	R CARBON FILM	1/6 20K OHM J	
R615	RD-AZ203J-	R CARBON FILM	1/6 20K OHM J	
R616	RD-AZ181J-	R CARBON FILM	1/6 180 OHM J	
R617	RD-AZ102J-	R CARBON FILM	1/6 1K OHM J	
R642	RD-AZ829J-	R CARBON FILM	1/6 8.2 OHM J	
R643	RD-AZ829J-	R CARBON FILM	1/6 8.2 OHM J	
R701	RD-AZ101J-	R CARBON FILM	1/6 100 OHM J	
R702	RD-AZ101J-	R CARBON FILM	1/6 100 OHM J	
R802	RC-2Z824KP	R CARBON COMP	1/2 820K OHM K	
R806	RD-4Z221J-	R CARBON FILM	1/4 220 OHM J	
R808	RD-AZ103J-	R CARBON FILM	1/6 10K OHM J	
R809	RD-2Z152J-	R CARBON FILM	1/2 1.5K OHM J	
R810	RD-2Z100J-	R CARBON FILM	1/2 10 OHM J	
R811	RD-4Z102J-	R CARBON FILM	1/4 1K OHM J	
R812	RC-2Z825KP	R CARBON COMP	1/2 8.2M OHM K	
R814	RD-4Z473J-	R CARBON FILM	1/4 47K OHM J	
R815	RD-4Z163J-	R CARBON FILM	1/4 16K OHM J	
R816	RD-AZ473J-	R CARBON FILM	1/6 47K OHM J	
R817	RD-AZ103J-	R CARBON FILM	1/6 10K OHM J	
R818	RD-AZ473J-	R CARBON FILM	1/6 47K OHM J	
R819	RD-4Z103J-	R CARBON FILM	1/4 10K OHM J	
R821	RD-AZ473J-	R CARBON FILM	1/6 47K OHM J	
R822	RN-4Z1003F	R METAL FILM	1/4 100K OHM F	
R823	RD-4Z392J-	R CARBON FILM	1/4 3.9K OHM J	
R824	RD-AZ103J-	R CARBON FILM	1/6 10K OHM J	
R825	RD-AZ432J-	R CARBON FILM	1/6 4.3K OHM J	
R827	RD-AZ151J-	R CARBON FILM	1/6 150 OHM J	
R840	RD-4Z682J-	R CARBON FILM	1/4 6.8K OHM J	
R841	RN-4Z1502F	R METAL FILM	1/4 15K OHM F	
R842	RN-AZ1101F	R METAL FILM	1/6 1.10K OHM F	
R843	RN-AZ1101F	R METAL FILM	1/6 1.10K OHM F	
R848	RD-AZ393J-	R CARBON FILM	1/6 39K OHM J	
RF01	RD-AZ241J-	R CARBON FILM	1/6 240 OHM J	
RF02	RD-AZ391J-	R CARBON FILM	1/6 390 OHM J	
RF03	RD-AZ681J-	R CARBON FILM	1/6 680 OHM J	
RF04	RD-AZ152J-	R CARBON FILM	1/6 1.5K OHM J	
RF05	RD-AZ911J-	R CARBON FILM	1/6 910 OHM J	
RF06	RD-AZ822J-	R CARBON FILM	1/6 8.2K OHM J	
RF08	RD-AZ223J-	R CARBON FILM	1/6 22K OHM J	
RF09	RD-AZ131J-	R CARBON FILM	1/6 130 OHM J	
RF10	RD-AZ101J-	R CARBON FILM	1/6 100 OHM J	
ZZ400	PTPMMSD908	PCB PIP MANUAL AS	DTR-29M5ME	
IP02	1K78R33—-	IC REGULATOR	KIA78R33PI	
PP01	4859279820	CONN WAFER	TAC-L18P-A3 (ANGLE)	
XP01	5XE20R250E	CRYSTAL QUARTZ	HC-49/U 20.2500MHZ 30PPM	
ZZ200	PTPMJ2D908	PCB PIP CHIP B AS	DTR-29M5ME	
IP01	1SDA9488XE	IC CHIP PIP	SDA9488X	
ZZ200	PTPMJRD908	PCB PIP RADIAL AS	DTR-29M5ME	
CP01	CXCH1H240J	C CERA	50V CH 24PF J (TAPPING)	
CP02	CXCH1H240J	C CERA	50V CH 24PF J (TAPPING)	
CP03	CCXB1H222K	C CERA	50V B 2200PF K (TAPPING)	
CP04	CCXB1H222K	C CERA	50V B 2200PF K (TAPPING)	
CP05	CEXF1H100V	C ELECTRO	50V RSS 10MF (5X11) TP	
CP08	CEXF1E470V	C ELECTRO	25V RSS 47MF (5X11) TP	
CP10	CEXF1E470V	C ELECTRO	25V RSS 47MF (5X11) TP	
CP11	CMXM2A103J	C MYLAR	100V 0.01MF J (TP)	
CP12	CEXF1H100V	C ELECTRO	50V RSS 10MF (5X11) TP	
CP14	CEXF1H109V	C ELECTRO	50V RSS 1MF (5X11) TP	
CP16	CEXF1H100V	C ELECTRO	50V RSS 10MF (5X11) TP	
CP18	CEXF1H229V	C ELECTRO	50V RSS 2.2MF (5X11) TP	

LOC	PART CODE	PART NAME	DESCRIPTION	REMARK
CP20	CEXF1H229V	C ELECTRO	50V RSS 2.2MF (5X11) TP	
CP21	CMXM2A473J	C MYLAR	100V 0.047MF J (TP)	
CP22	CMXM2A473J	C MYLAR	100V 0.047MF J (TP)	
CP23	CMXM2A473J	C MYLAR	100V 0.047MF J (TP)	
ZZ200	PTPMJAD908	PCB PIP AXIAL AS	DTR-29M5ME	
10	2TM14006LB	TAPE MASKING	3M #232 6.0X2000M	
20	2TM10006LB	TAPE MASKING	3M #232-MAP-C 6.2X2000M	
A001	4859813924	PCB PIP	197X246(2X4) 1.6T	
CP06	CBZP1C103M	C CERA SEMI	16V Y5S 0.01MF M (AXIAL)	
CP09	CBZF1H104Z	C CERA SEMI	50V F 0.1MF Z	
CP13	CCZF1H103Z	C CERA	50V F 0.01MF Z	
CP15	CCZF1H103Z	C CERA	50V F 0.01MF Z	
CP17	CCZF1H103Z	C CERA	50V F 0.01MF Z	
CP19	CCZF1H103Z	C CERA	50V F 0.01MF Z	
JP01	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING	
JP02	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING	
JP04	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING	
JP05	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING	
LP02	5CPZ100K02	COIL PEAKING	10UH K (AXIAL 3.5MM)	
LP03	5CPZ100K02	COIL PEAKING	10UH K (AXIAL 3.5MM)	
LP04	5CPZ100K02	COIL PEAKING	10UH K (AXIAL 3.5MM)	
LP05	5CPZ100K02	COIL PEAKING	10UH K (AXIAL 3.5MM)	
RP01	RD-AZ103J-	R CARBON FILM	1/6 10K OHM J	
RP02	RD-AZ473J-	R CARBON FILM	1/6 47K OHM J	
RP03	RD-AZ221J-	R CARBON FILM	1/6 220 OHM J	
RP04	RD-AZ221J-	R CARBON FILM	1/6 220 OHM J	
RP05	RD-AZ102J-	R CARBON FILM	1/6 1K OHM J	
RP07	RD-AZ101J-	R CARBON FILM	1/6 100 OHM J	
RP08	RD-AZ101J-	R CARBON FILM	1/6 100 OHM J	
RP09	RD-AZ101J-	R CARBON FILM	1/6 100 OHM J	
RP14	RD-AZ102J-	R CARBON FILM	1/6 1K OHM J	
RP15	RD-AZ102J-	R CARBON FILM	1/6 1K OHM J	
ZZ600	PTUNSWD908	PCB UNION AS	DTR-29M5ME	
C908	CH1BFE472M	C CERA AC	AC400V 4700PF M U/C/V	
HP01	4859105240	JACK PHONE	LGT1516-0100	
I901	PTC2SW5403	HEAT SINK ASS`Y	1STV5109— + 7174300811	
00001	1STV5109—	IC VIDEO AMP	STV5109	
0000A	4857025403	HEAT SINK	AL050P-H24 T=2	
0000B	7174300811	SCREW TAPPTITE	TT2 RND 3X8 MFZN	
ID01	1PNA4603H-	IC PHOTO SENSOR	PNA4603H	
JV03	4859105450	JACK PIN BOARD	YSC03P-4120-9S	
M231	4851114004	PANEL AV ASSY	2326802+5934302	
M231A	7178301011	SCREW TAPPTITE	TT2 WAS 3X10 MFZN	
M681	4856812001	TIE CABLE	NYLON66 DA100	
M781	4857821300	CLOTH BLACK	CLOTH	
P501A	4850707S09	CONNECTOR	YH025-07+YST025+ULW=500	
P502A	4850704S04	CONNECTOR	YH025-04+YST025+ULW=400	
P602A	4850705S12	CONNECTOR	YH025-05+YST025+ULW=500	
P603A	4850706S18	CONNECTOR	YH025-06+YST025+ULW=500	
P604A	4850703S45	CONNECTOR	YH025-03+YST025+USW=400	
PDA1	4850703S18	CONNECTOR	YH025-03+YBNH250+ULW=200	
SCT1	4859303830	SOCKET CRT	ISHG94S	
ZZ200	PTUNJ0D908	PCB UNION RHU AS	DTR-29M5ME	
C904	CEXF2E100V	C ELECTRO	250V RSS 10MF (10X20) TP	
C909	CEXF2E100V	C ELECTRO	250V RSS 10MF (10X20) TP	
ZZ200	PTUNJBD908	PCB UNION M-10 AS	DTR-29M5ME	
R907	RS01Z683J-	R M-OXIDE FILM	1W 68K OHM J (TAPPING)	
R908	RS01Z683J-	R M-OXIDE FILM	1W 68K OHM J (TAPPING)	
R909	RS01Z683J-	R M-OXIDE FILM	1W 68K OHM J (TAPPING)	
R919	RS02Z369JS	R M-OXIDE FILM	2W 3.6 OHM J SMALL	

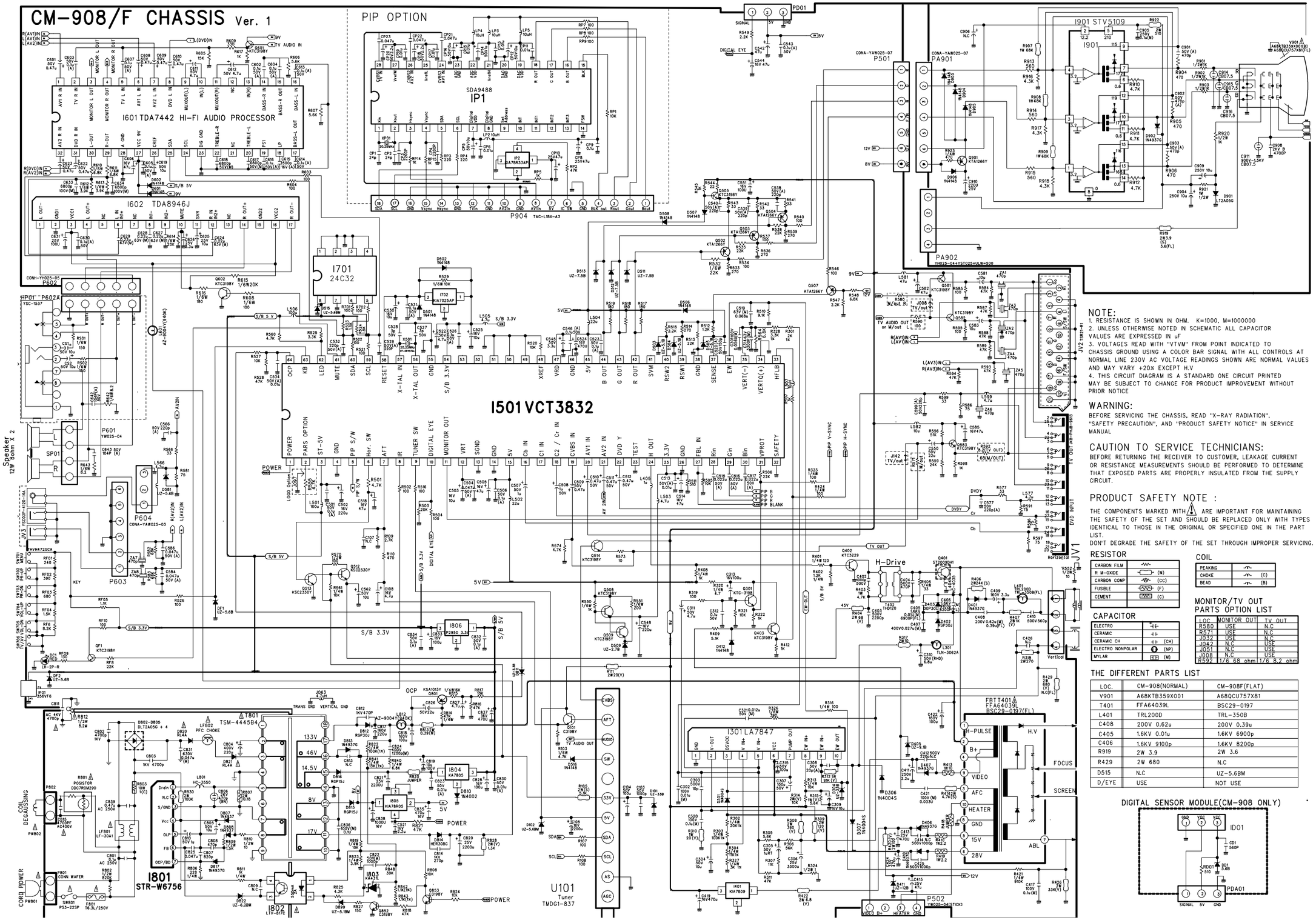
LOC	PART CODE	PART NAME	DESCRIPTION	REMARK
R922	RS02Z561JS	R M-OXIDE FILM	2W 560 OHM J SMALL	
ZZ200	PTUNJRD908	PCB UNION RADIAL AS	DTR-29M5ME	
C905	CMXL2E104K	C MYLAR	250V MEU 0.1MF K	
C910	CEXF1E221V	C ELECTRO	25V RSS 220MF (8X11.5) TP	
C911	4SG0DX0001	SPARK GAP	SSG-102-A1(1.0KV) TAP	
C914	4SG0DX0001	SPARK GAP	SSG-102-A1(1.0KV) TAP	
C915	4SG0DX0001	SPARK GAP	SSG-102-A1(1.0KV) TAP	
C916	4SG0DX0001	SPARK GAP	SSG-102-A1(1.0KV) TAP	
CS01	CEXF1H100V	C ELECTRO	50V RSS 10MF (5X11) TP	
CS02	CEXF1H100A	C ELECTRO	50V RSM 10MF (5X7) TP	
Q901	TKTA1266Y-	TR	KTA1266Y (TP)	
RS01	RN01B151JS	R METAL FILM	1W 150 OHM J SMALL	
RS02	RN01B151JS	R METAL FILM	1W 150 OHM J SMALL	
ZZ200	PTUNJAD908	PCB UNION AXIAL AS	DTR-29M5ME	
A001	4859809460	PCB UNION	230X61(246X246/2) FR-1 1.6T	
C901	CCZB1H471K	C CERA	50V B 470PF K (AXIAL)	
C902	CCZB1H471K	C CERA	50V B 470PF K (AXIAL)	
C903	CCZB1H471K	C CERA	50V B 470PF K (AXIAL)	
CD01	CCZB1H561K	C CERA	50V B 560PF K	
D901	DLT2A05G—	DIODE	LT2A05G (TP)	
D902	D1N4937G—	DIODE	1N4937G (TAPPING)	
D903	D1N4148—-	DIODE	1N4148 (TAPPING)	
D904	D1N4148—-	DIODE	1N4148 (TAPPING)	
D905	D1N4148—-	DIODE	1N4148 (TAPPING)	
D906	D1N4148—-	DIODE	1N4148 (TAPPING)	

LOC	PART CODE	PART NAME	DESCRIPTION	REMARK
DD01	DUZ7R5BM—	DIODE ZENER	UZ-7.5BM	
J901	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING	
J902	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING	
J903	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING	
J904	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING	
JS01	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING	
R901	RD-2Z102J-	R CARBON FILM	1/2 1K OHM J	
R902	RD-2Z102J-	R CARBON FILM	1/2 1K OHM J	
R903	RD-2Z102J-	R CARBON FILM	1/2 1K OHM J	
R904	RD-AZ471J-	R CARBON FILM	1/6 470 OHM J	
R905	RD-AZ471J-	R CARBON FILM	1/6 470 OHM J	
R906	RD-AZ471J-	R CARBON FILM	1/6 470 OHM J	
R910	RD-AZ472J-	R CARBON FILM	1/6 4.7K OHM J	
R911	RD-AZ472J-	R CARBON FILM	1/6 4.7K OHM J	
R912	RD-AZ472J-	R CARBON FILM	1/6 4.7K OHM J	
R913	RD-AZ561J-	R CARBON FILM	1/6 560 OHM J	
R914	RD-AZ561J-	R CARBON FILM	1/6 560 OHM J	
R915	RD-AZ561J-	R CARBON FILM	1/6 560 OHM J	
R916	RD-AZ432J-	R CARBON FILM	1/6 4.3K OHM J	
R917	RD-AZ432J-	R CARBON FILM	1/6 4.3K OHM J	
R918	RD-AZ432J-	R CARBON FILM	1/6 4.3K OHM J	
R920	RD-2Z102J-	R CARBON FILM	1/2 1K OHM J	
R921	RD-2Z105J-	R CARBON FILM	1/2 1M OHM J	
R923	RD-4Z471J-	R CARBON FILM	1/4 470 OHM J	
RD01	RD-AZ511J-	R CARBON FILM	1/6 510 OHM J	

7. EACH MODEL PARTS LIST

LOC	PART NAME	NORMAL	FLAT
L401	COIL H-LINEARITY	TRL-200D	TRL-350B
T401	FBT	FFA64039L	BSC29-0197
C408	C MYLAR	200V 0.62 MF	200V 0.39MF
C405	C MYLAR	1.6KV 0.01MF	1.6KV 6900PF
C406	C MYLAR	1.6KV 91200PF	1.6KV 8200PF
R919	R M-OXIDE FILM	2W 3.9 OHM	2W 3.6 OHM
R429	R METAL FILM	2W 680 OHM J SMALL	N.C
D515	DIODE ZENER	N.C	UZ-5.6BM
A001	PCB MAIN	4859808993	4859808993
DIGITAL EYE MODULE		O	X

8. Schmetic Diagram



NOTE:
1. RESISTANCE IS SHOWN IN OHM. K=1000, M=1000000
2. UNLESS OTHERWISE NOTED IN SCHEMATIC ALL CAPACITOR VALUES ARE EXPRESSED IN uF
3. VOLTAGES READ WITH "VTVM" FROM POINT INDICATED TO CHASSIS GROUND USING A COLOR BAR SIGNAL WITH ALL CONTROLS AT NORMAL LINE 230V AC VOLTAGE READINGS SHOWN ARE NORMAL VALUES AND MAY VARY +20% EXCEPT H.V
4. THIS CIRCUIT DIAGRAM IS A STANDARD ONE CIRCUIT PRINTED MAY BE SUBJECT TO CHANGE FOR PRODUCT IMPROVEMENT WITHOUT PRIOR NOTICE

WARNING:
BEFORE SERVICING THE CHASSIS, READ "X-RAY RADIATION", "SAFETY PRECAUTION", AND "PRODUCT SAFETY NOTICE" IN SERVICE MANUAL

CAUTION TO SERVICE TECHNICIANS:
BEFORE RETURNING THE RECEIVER TO CUSTOMER, LEAKAGE CURRENT OR RESISTANCE MEASUREMENTS SHOULD BE PERFORMED TO DETERMINE THAT EXPOSED PARTS ARE PROPERLY INSULATED FROM THE SUPPLY CIRCUIT.

PRODUCT SAFETY NOTE :
THE COMPONENTS MARKED WITH ⚠ ARE IMPORTANT FOR MAINTAINING THE SAFETY OF THE SET AND SHOULD BE REPLACED ONLY WITH TYPES IDENTICAL TO THOSE IN THE ORIGINAL OR SPECIFIED ONE IN THE PART LIST.
DON'T DEGRADE THE SAFETY OF THE SET THROUGH IMPROPER SERVICING.

RESISTOR

CARBON FILM		
R M-OXIDE		(M)
CARBON COMP		(CC)
FUSIBLE		(F)
CEMENT		(C)

COIL

PEAKING		
CHOKE		(C)
BEAD		(B)

CAPACITOR

ELECTRO	+	
CERAMIC	+	
CERAMIC CH	+	(CH)
ELECTRO NONPOLAR		(NP)
MYLAR		(M)

MONITOR/TV OUT PARTS OPTION LIST

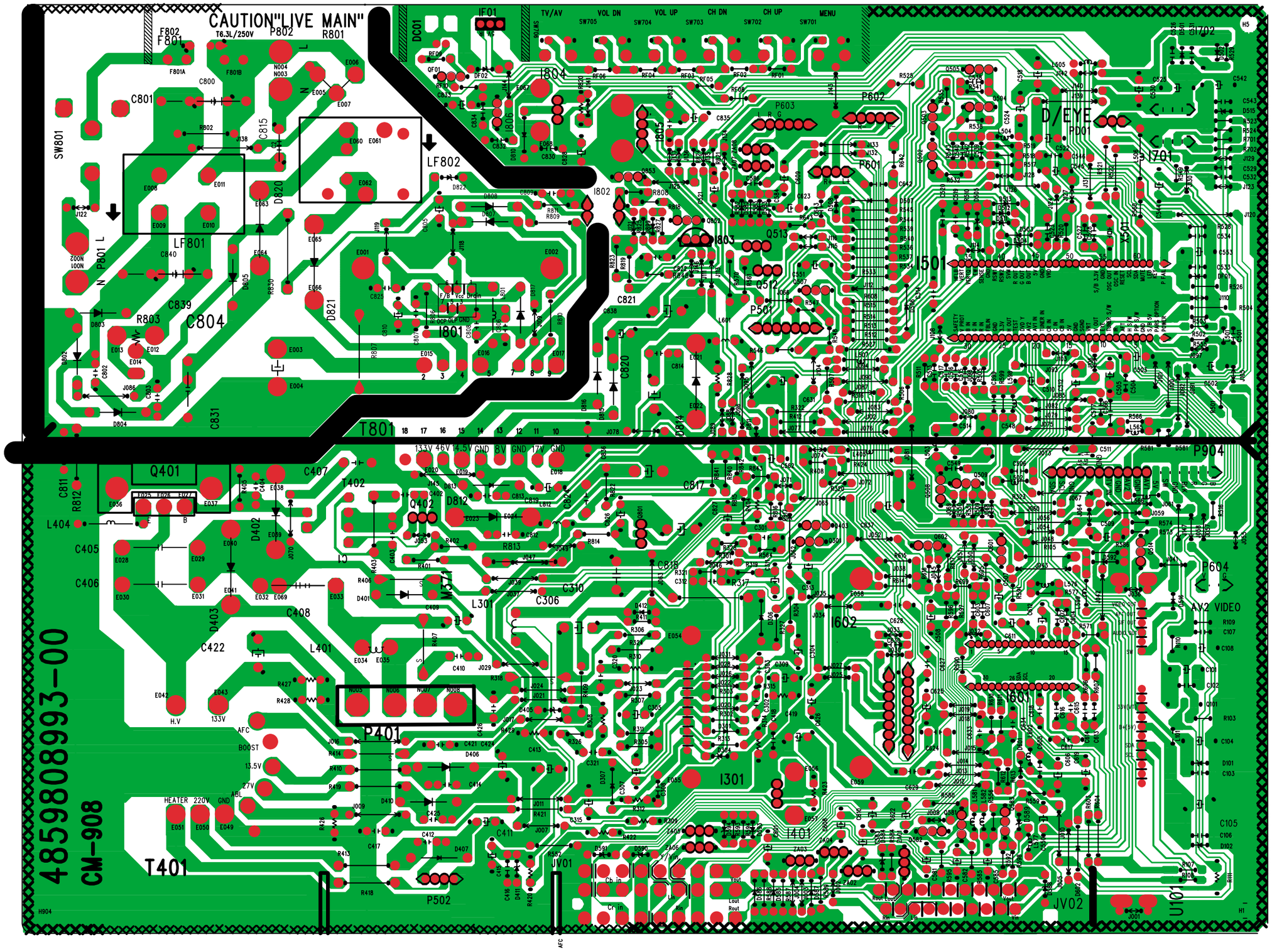
LOC.	MONITOR OUT	TV OUT
R580	USE	N.C
R571	USE	N.C
J032	USE	N.C
J042	N.C	USE
J051	N.C	USE
J008	N.C	USE
R592	1/6 68 ohm	1/6 8.2 ohm

THE DIFFERENT PARTS LIST

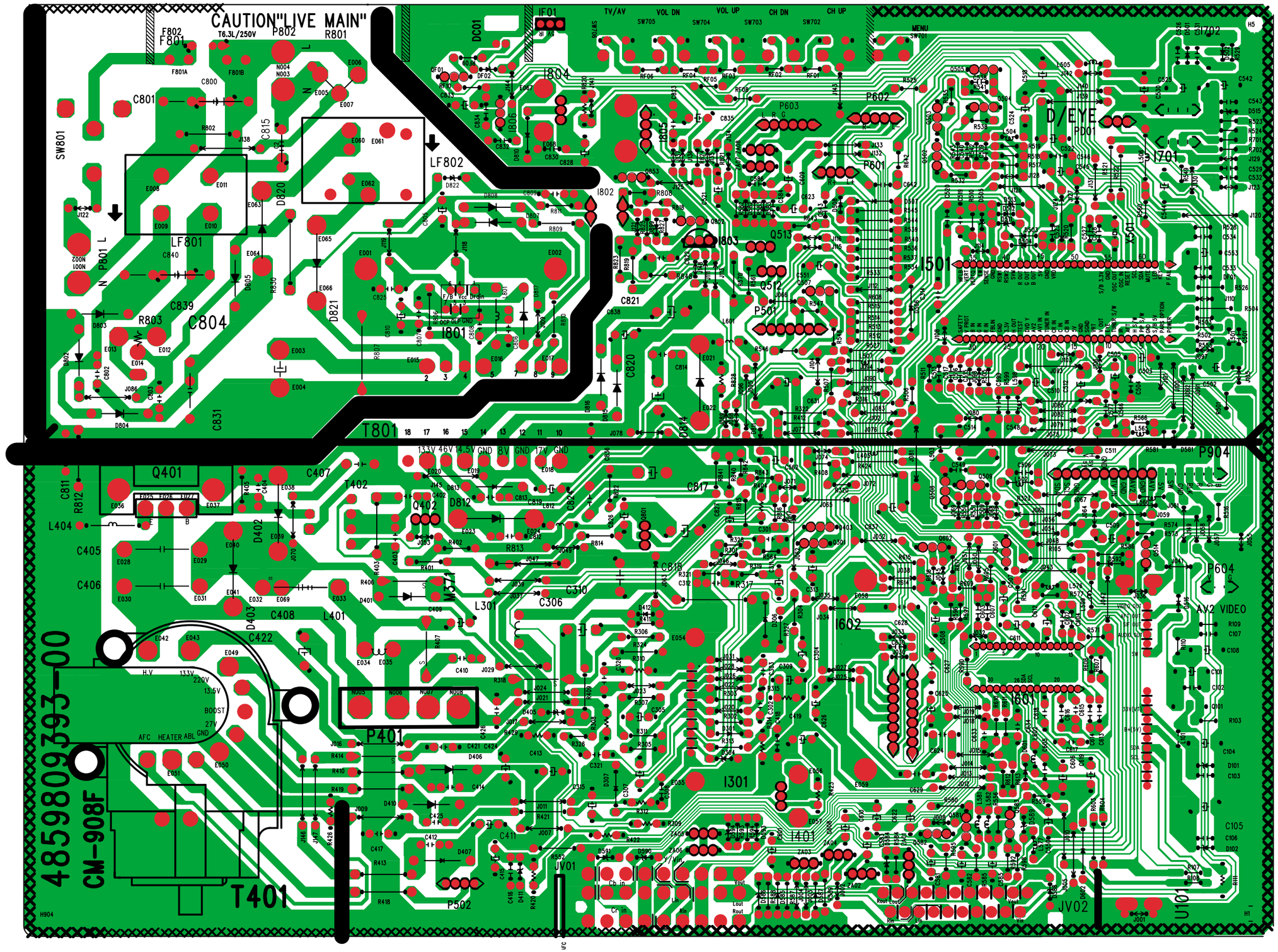
LOC.	CM-908(NORMAL)	CM-908F(FLAT)
V901	A68KTB359X001	A68QCU757X81
T401	FFA64039L	BSC29-0197
L401	TRL200D	TRL-350B
C408	200V 0.62u	200V 0.39u
C405	1.6KV 0.01u	1.6KV 6900p
C406	1.6KV 9100p	1.6KV 8200p
R919	2W 3.9	2W 3.6
R429	2W 680	N.C
D515	N.C	UZ-5.6BM
D/EYE	USE	NOT USE

DIGITAL SENSOR MODULE(CM-908 ONLY)

9. Printed Circuit Board (CM-908)

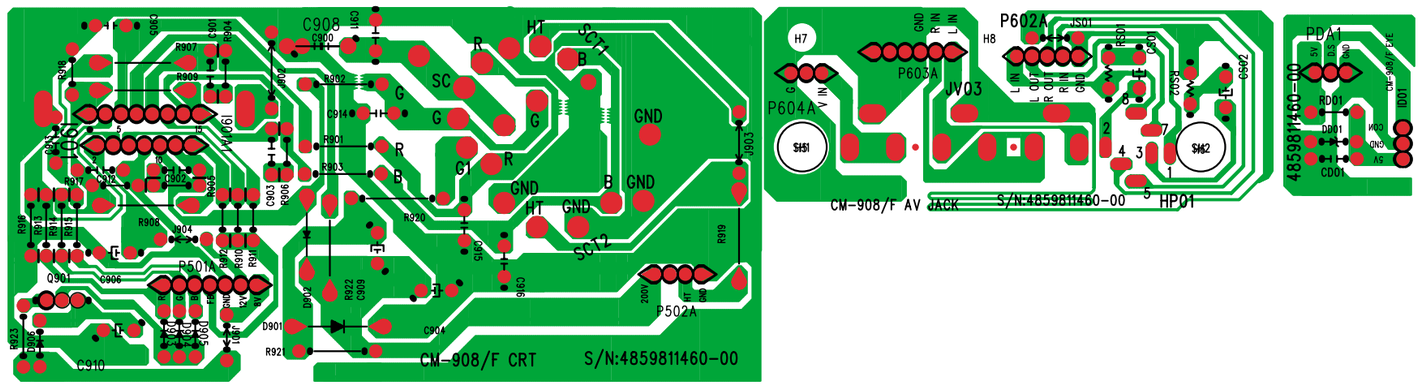


9. Printed Circuit Board (CM-908F)



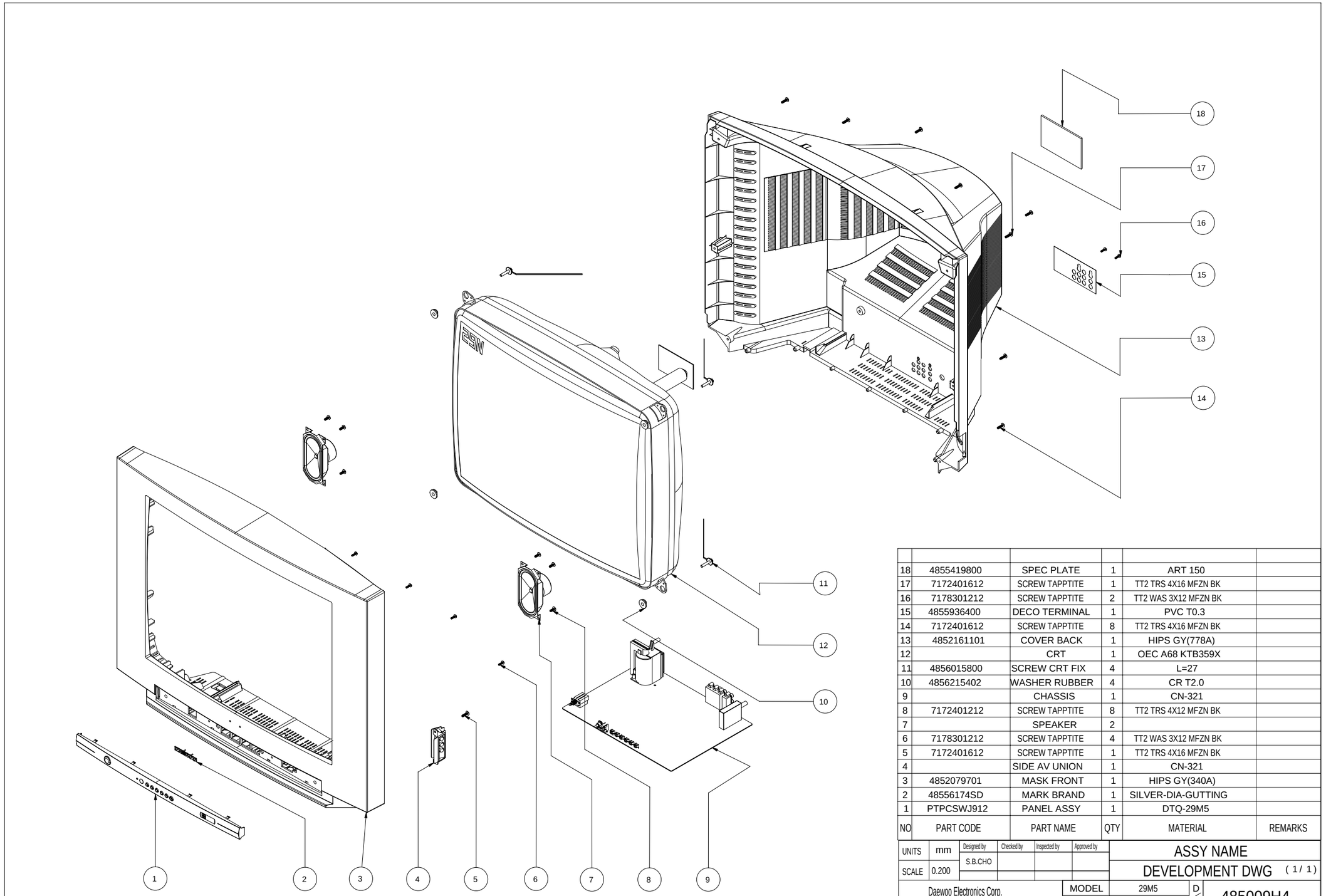
9. Printed Circuit Board (Union,PIP)

CM-908/F UNION



10. Mechanical Exploded View

10-1 DTR-29M5



NO	PART CODE	PART NAME	QTY	MATERIAL	REMARKS
18	4855419800	SPEC PLATE	1	ART 150	
17	7172401612	SCREW TAPPTITE	1	TT2 TRS 4X16 MFZN BK	
16	7178301212	SCREW TAPPTITE	2	TT2 WAS 3X12 MFZN BK	
15	4855936400	DECO TERMINAL	1	PVC T0.3	
14	7172401612	SCREW TAPPTITE	8	TT2 TRS 4X16 MFZN BK	
13	4852161101	COVER BACK	1	HIPS GY(778A)	
12		CRT	1	OEC A68 KTB359X	
11	4856015800	SCREW CRT FIX	4	L=27	
10	4856215402	WASHER RUBBER	4	CR T2.0	
9		CHASSIS	1	CN-321	
8	7172401212	SCREW TAPPTITE	8	TT2 TRS 4X12 MFZN BK	
7		SPEAKER	2		
6	7178301212	SCREW TAPPTITE	4	TT2 WAS 3X12 MFZN BK	
5	7172401612	SCREW TAPPTITE	1	TT2 TRS 4X16 MFZN BK	
4		SIDE AV UNION	1	CN-321	
3	4852079701	MASK FRONT	1	HIPS GY(340A)	
2	48556174SD	MARK BRAND	1	SILVER-DIA-GUTTING	
1	PTPCSWJ912	PANEL ASSY	1	DTQ-29M5	

UNITS	mm	Designed by	Checked by	Inspected by	Approved by	ASSY NAME
SCALE	0.200	S.B.CHO				DEVELOPMENT DWG (1 / 1)

Daewoo Electronics Corp.
Mechanical Design Team, TV Research Center

MODEL	29M5	D/N	485009H4
REFERENCE			

Mechanical Exploded View

10-2 DTR-29M6

REV	LIST OF MODIFICATION	REASON OF MODIFICATION	DATE	NAME	APPR
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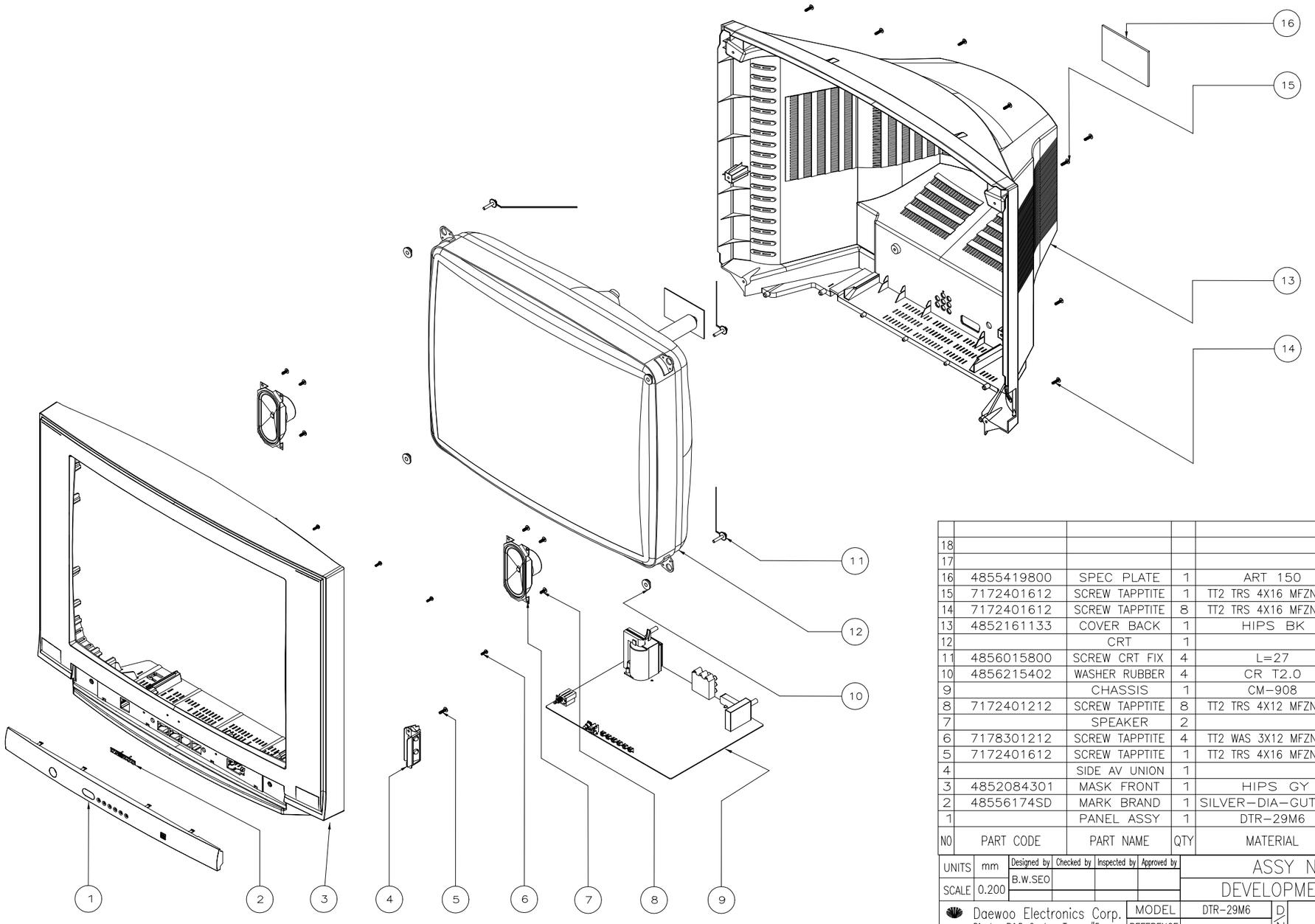
2					



NO	PART CODE	PART NAME	QTY	MATERIAL	REMARKS
18					
17					
16	4855419800	SPEC PLATE	1	ART 150	
15	7172401612	SCREW TAPPTITE	1	TT2 TRS 4X16 MFZN BK	13+FBT
14	7172401612	SCREW TAPPTITE	8	TT2 TRS 4X16 MFZN BK	13+3
13	4852161133	COVER BACK	1	HIPS BK	
12		CRT	1		
11	4856015800	SCREW CRT FIX	4	L=27	
10	4856215402	WASHER RUBBER	4	CR T2.0	
9		CHASSIS	1	CM-908	
8	7172401212	SCREW TAPPTITE	8	TT2 TRS 4X12 MFZN BK	7+3
7		SPEAKER	2		
6	7178301212	SCREW TAPPTITE	4	TT2 WAS 3X12 MFZN BK	3+1
5	7172401612	SCREW TAPPTITE	1	TT2 TRS 4X16 MFZN BK	4+3
4		SIDE AV UNION	1		
3	4852084301	MASK FRONT	1	HIPS GY	
2	48556174SD	MARK BRAND	1	SILVER-DIA-GUTTING	
1		PANEL ASSY	1	DTR-29M6	

UNITS	mm	Designed by	Checked by	Inspected by	Approved by	ASSY NAME
SCALE	0.200	B.W.SEO				DEVELOPMENT DWG

Daewoo Electronics Corp.
Display R&D Center, Team #5

MODEL	DTR-29M6	D/N
REFERENCE		

Mechanical Exploded View

10-3 DTR-29M7

REV	LIST OF MODIFICATION	REASON OF MODIFICATION	DATE	NAME	APPR
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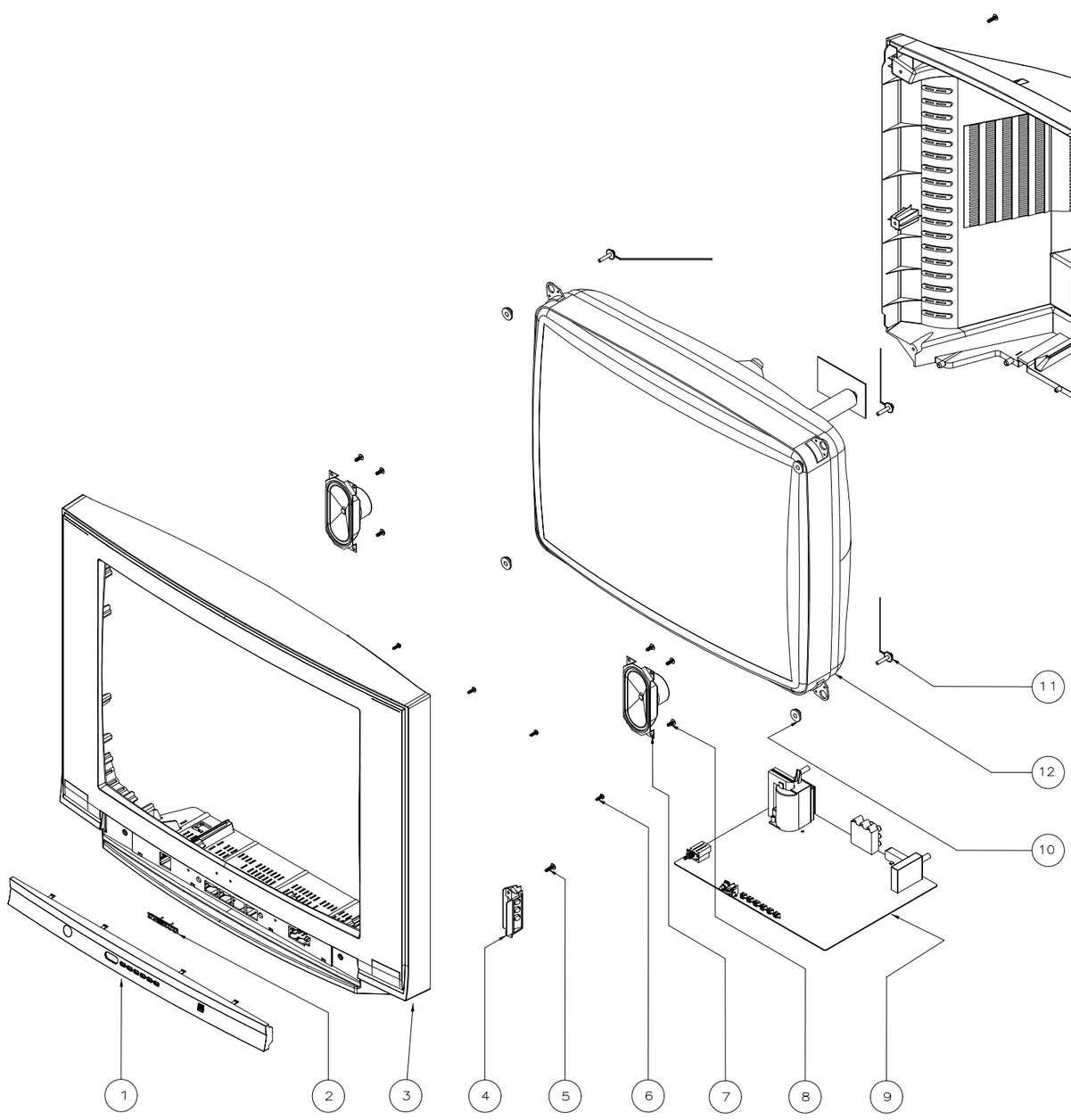

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17					
16	4855419800	SPEC PLATE	1	ART 150	
15	7172401612	SCREW TAPPTITE	1	TT2 TRS 4X16 MFZN BK	13+FBT
14	7172401612	SCREW TAPPTITE	8	TT2 TRS 4X16 MFZN BK	13+3
13	4852161113	COVER BACK	1	HIPS BK	
12		CRT	1		
11	4856015800	SCREW CRT FIX	4	L=27	
10	4856215402	WASHER RUBBER	4	CR T2.0	
9		CHASSIS	1	CM-908	
8	7172401212	SCREW TAPPTITE	8	TT2 TRS 4X12 MFZN BK	7+3
7		SPEAKER	2		
6	7178301212	SCREW TAPPTITE	4	TT2 WAS 3X12 MFZN BK	3+1
5	7172401612	SCREW TAPPTITE	1	TT2 TRS 4X16 MFZN BK	4+3
4		SIDE AV UNION	1		
3	4852084301	MASK FRONT	1	HIPS GY	
2	48556174SD	MARK BRAND	1	SILVER-DIA-GUTTING	
1		PANEL ASSY	1	DTR-29M7	

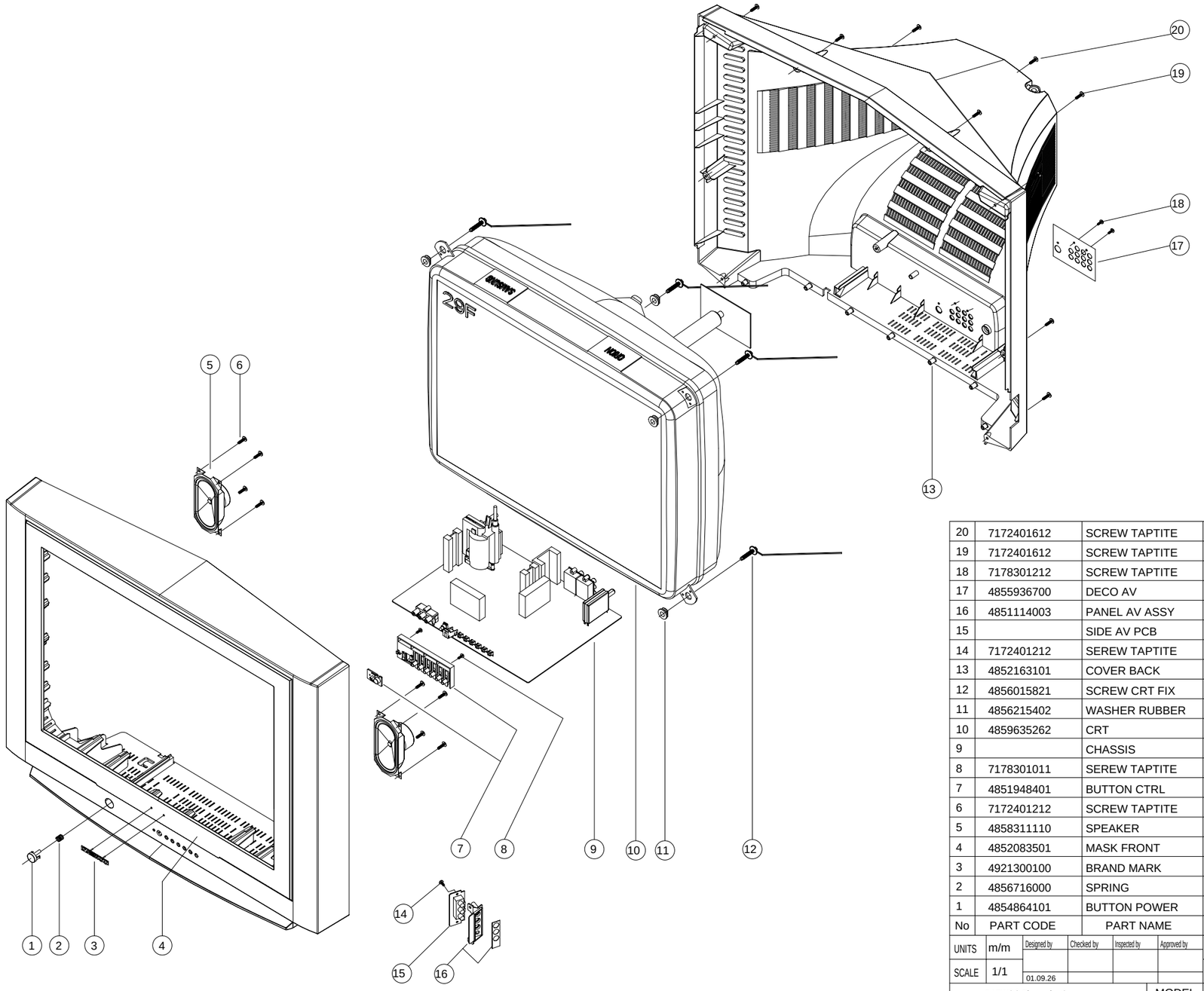
UNITS	mm	Designed by	Checked by	Inspected by	Approved by	ASSY NAME
SCALE	0.200	B.W.SEO				DEVELOPMENT DWG

Daewoo Electronics Corp.
Display R&D Center, Team #5

MODEL	DTR-29M7	D/N
REFERENCE		

Mechanical Exploded View

10-4 DTR-29U1



No	PART CODE	PART NAME	Q'ty	MATERIAL	REMARKS
20	7172401612	SCREW TAPTITE	8	TT2 TRS 4X16 MFZN BK	
19	7172401612	SCREW TAPTITE	1	TT2 TRS 4X16 MFZN BK	
18	7178301212	SCREW TAPTITE	2	TT2 WAS 3X12 MFZN BK	
17	4855936700	DECO AV	1	PVC T0.25	
16	4851114003	PANEL AV ASSY	1	2326802+5934301	
15		SIDE AV PCB	1	CN-321	
14	7172401212	SEREW TAPTITE	1	TT2 TRS 4X12 MFZN BK	
13	4852163101	COVER BACK	1	HIPS GY	
12	4856015821	SCREW CRT FIX	4	SWRM+SK5 L=35	
11	4856215402	WASHER RUBBER	4	CR T2.0	
10	4859635262	CRT	1	29"F	
9		CHASSIS	1	CN-793F	
8	7178301011	SEREW TAPTITE	2	TT2 WAS 3X10 MFZN	
7	4851948401	BUTTON CTRL	1	4955101+5549200	
6	7172401212	SCREW TAPTITE	8	TT2 TRS 4X12 MFZN BK	
5	4858311110	SPEAKER	2	12W 8 OHM SP-58126F	
4	4852083501	MASK FRONT	1	HIPS GY	
3	4921300100	BRAND MARK	1	A1	
2	4856716000	SPRING	1	SWPA PIE0.5	
1	4854864101	BUTTON POWER	1	HIPS GY	

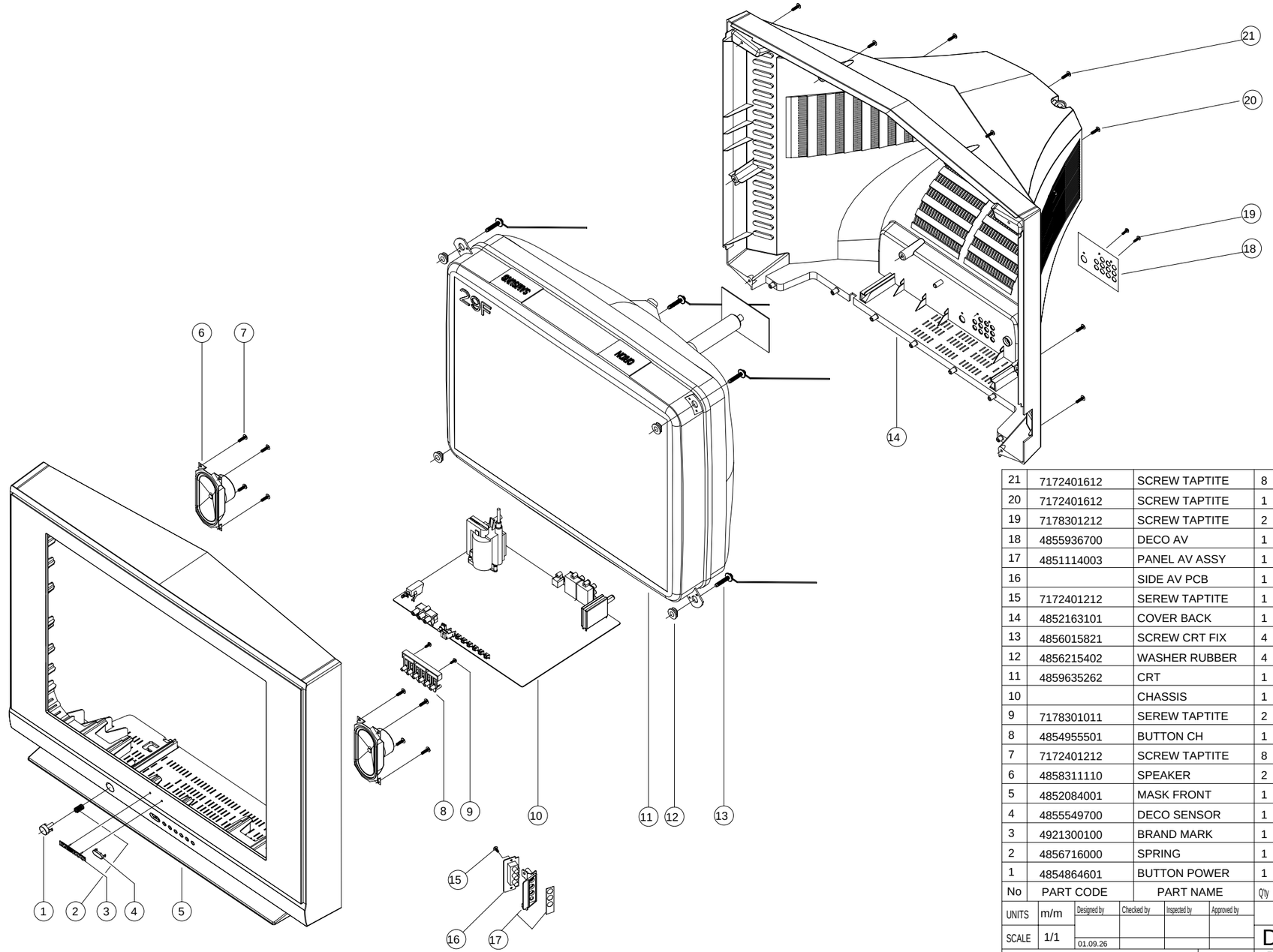
UNITS	m/m	Designed by	Checked by	Inspected by	Approved by	PART NAME
SCALE	1/1	01.09.26				DEVELOPMENT DWG

DAEWOO Electronics Corp.
Mechanical Design Team, TV Research Center

MODEL: DTQ-29U1 | D/N: 485009KR
REFERENCE:

Mechanical Exploded View

10-5 DTR-29U5



No	PART CODE	PART NAME	Q'ty	MATERIAL	REMARKS
21	7172401612	SCREW TAPTITE	8	TT2 TRS 4X16 MFZN BK	
20	7172401612	SCREW TAPTITE	1	TT2 TRS 4X16 MFZN BK	
19	7178301212	SCREW TAPTITE	2	TT2 WAS 3X12 MFZN BK	
18	4855936700	DECO AV	1	PVC T0.25	
17	4851114003	PANEL AV ASSY	1	2326802+5934301	
16		SIDE AV PCB	1	CN-321	
15	7172401212	SEREW TAPTITE	1	TT2 TRS 4X12 MFZN BK	
14	4852163101	COVER BACK	1	HIPS GY	
13	4856015821	SCREW CRT FIX	4	SWRM+SK5 L=35	
12	4856215402	WASHER RUBBER	4	CR T2.0	
11	4859635262	CRT	1	29"F	
10		CHASSIS	1	CN-794F	
9	7178301011	SEREW TAPTITE	2	TT2 WAS 3X10 MFZN	
8	4854955501	BUTTON CH	1	ABS GY	
7	7172401212	SCREW TAPTITE	8	TT2 TRS 4X12 MFZN BK	
6	4858311110	SPEAKER	2	12W 8 OHM SP-58126F	
5	4852084001	MASK FRONT	1	HIPS GY	
4	4855549700	DECO SENSOR	1	PC SMOG	
3	4921300100	BRAND MARK	1	A1	
2	4856716000	SPRING	1	SWPA PIE0.5	
1	4854864601	BUTTON POWER	1	HIPS GY	

UNITS	m/m	Designed by	Checked by	Inspected by	Approved by	PART NAME
SCALE	1/1	01.09.26				DEVELOPMENT DWG

DAEWOO Electronics Corp.
Mechanical Design Team, TV Research Center

MODEL: DTQ-29U5
REFERENCE:
D/N: 485009KU

1. Introduction

The VCT 38xxA/B is an IC family of high-quality single-chip TV processors. Modular design and a submicron technology allow the economic integration of features in all classes of TV sets. The VCT 38xxA/B family is based on functional blocks contained and approved in existing products like VDP 3120B, TPU 3050S, and CCZ 3005K.

Each member of the family contains the entire video,display, and deflection processing for 4:3 and 16:9 50/ 60-Hz TV sets. The integrated microcontroller is sup-ported by a powerful OSD generator with integrated teletext acquisition which can be upgraded with on-chip page memory. With volume control and audio input select the basic audio features for mono TV sets are integrated. An overview of the VCT 38xxA/B sin-gle-chip TV processor family is given in Fig. 1–1 on page 7.

The VCT 38xxA/B family offers a rich feature set, covering the whole range of state-of-the-art 50/60-Hz TV applications.

In comparison to the VCT 38xxA the VCT 38xxB offers the following features:

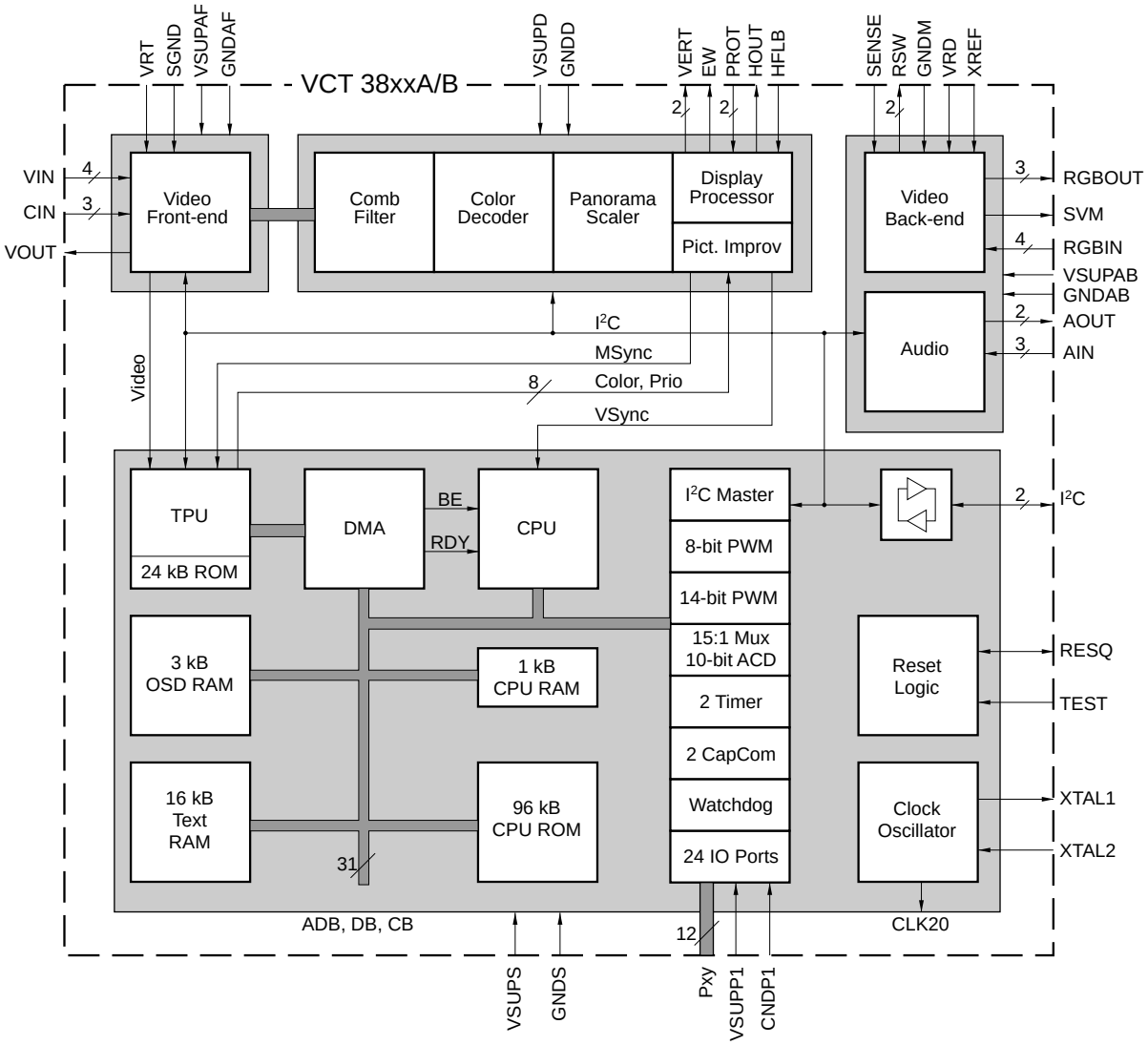
– one additional composite video input

– analog luma/chroma adder for video output

– closed caption module

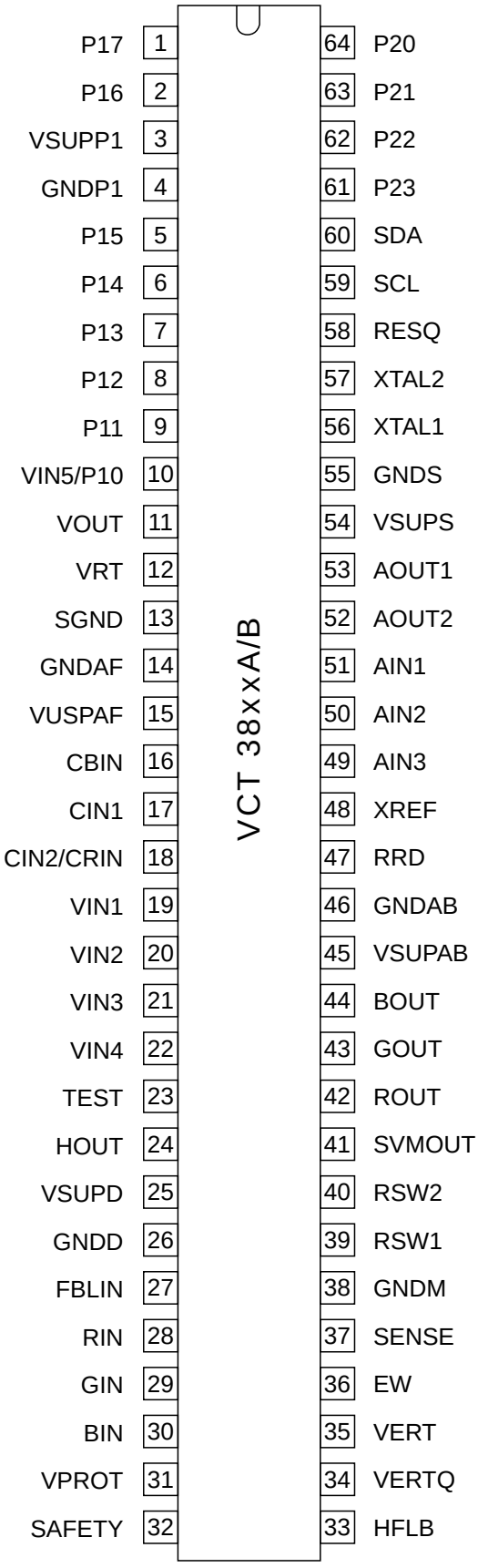
– additional 12k character ROM

2. Chip Architecture



VCT 38xxA/B

3. Pin Configuration



4. Pin Connections and Short descriptions

NC=not connected
LV=if not used, leave vacant
X=obligatory;connect as described in circuit diagram

IN=Input
OUT=Output
SUPPLY=Supply Pin

Pin No. PSDIP 64-pin	Pin Name	Type	Connection (if not used)	Short Description
1	P17	IN/OUT	LV	Port 1, Bit 7
2	P16	IN/OUT	LV	Port 1, Bit 6
3	$VSUP_{P1}$	SUPPLY	X	Supply Voltage, Port 1
4	GND_{P1}	SUPPLY	X	Ground, Port 1
5	P15	IN/OUT	LV	Port 1, Bit 5
6	P14	IN/OUT	LV	Port 1, Bit 4
7	P13	IN/OUT	LV	Port 1, Bit 3
8	P12	IN/OUT	LV	Port 1, Bit 2
9	P11	IN/OUT	LV	Port 1, Bit 1
10	P10 / VIN5	IN/OUT	LV	Port 1, Bit 0 Analog Video 5 Input(VCT 38xxB only!)
11	VOUT	OUT	LV	Analog Video Output
12	VRT	IN	X	Reference Voltage Top, Video ADC
13	SGND	IN	GND_{AF}	Signal Ground for Analog Input
14	GND_{AF}	SUPPLY	X	Ground, Analog Front-end
15	$VSUP_{AF}$	SUPPLY	X	Supply Voltage, Analog Front-end
16	CBIN	IN	VRT	Analog Component Cb Input
17	CIN1	IN	VRT	Analog Chroma 1 Input
18	CIN2/CRIN	IN	VRT	Analog Chroma 2 Input Analog Component Cr Input
19	VIN1	IN	VRT	Analog Video 1 Input
20	VIN2	IN	VRT	Analog Video 2 Input
21	VIN3	IN	VRT	Analog Video 3 Input
22	VIN4	IN	VRT	Analog Video 4 Input
23	TEST	IN	GND	Test Pin, reserved for Test
24	HOUT	OUT	X	Horizontal Drive Output
25	$VSUP_{D}$	SUPPLY	X	Supply Voltage, Digital Circuitry
26	GND_{D}	SUPPLY	X	Supply, Digital Circuitry
27	FBLIN	IN	GND_{AB}	Fast Blank Input
28	RIN	IN	GND_{AB}	Analog Red Input
29	GIN	IN	GND_{AB}	Analog Green Input
30	BIN	IN	GND_{AB}	Analog Blue Input
31	VPROT	IN	GND_{D}	Vertical Protection Input
32	SAFETY	IN	GND_{D}	Sefety Input
33	HFLB	IN	HOUT	Horizontal Flyback Input
34	VERTQ/ INTLC	OUT	LV	Differential Vertical Sawtooth Output Interlace Control Output

Pin No. PSDIP 64-pin	Pin Name	Type	Connection (if not used)	Short Description
35	VERT	OUT	LV	Differential Vertical Sawtooth Output
36	EW	OUT	LV	Vertical Parabola Output
37	SENSE	IN	GND_{AB}	Sense ADC Input
38	GNDM	SUPPLY	X	Ground, MADC Input
39	RSW1	OUT	LV	Range Switch1 for Measurement ADC
40	RSW2	OUT	LV	Range Switch2 for Measurement ADC
41	SVMOUT	OUT	$VSUP_{AB}$	Scan Velocity Modulation Output
42	ROUT	OUT	$VSUP_{AB}$	Analog Red Output
43	GOUT	OUT	$VSUP_{AB}$	Analog Green Output
44	BOUT	OUT	$VSUP_{AB}$	Analog Blue Output
45	$VSUP_{AB}$	SUPPLY	X	Supply Voltage, Analog Back-end
46	GND_{AB}	SUPPLY	X	Ground, Analog Back-end
47	VRD	IN	X	DAC Reference
48	XREF	IN	X	Regerence Input for RGB DACs
49	AIN3	IN	GND_S	Analog Audio 3Input
50	AIN2	IN	GND_S	Analog Audio 2Input
51	AIN1	IN	GND_S	Analog Audio 1Input
52	AOUT2	OUT	LV	Analog Audio 2 Output
53	AOUT1	OUT	LV	Analog Audio 1 Output
54	$VSUP_S$	SUPPLY	X	Supply Voltage, Standby
55	GND_S	SUPPLY	X	Ground, Standby
56	XTAL1	IN	X	Analog Crystal Input
57	XTAL2	OUT	X	Analog Crystal Output
58	RESQ	IN/OUT	X	Reset Input/Output, Active Low
59	SCL	IN/OUT	X	I^2C Bus Clock
60	SDA	IN/OUT	X	I^2C Bus Data
61	P23	IN/OUT	LV	Port 2, Bit 3
62	P22	IN/OUT	LV	Port 2, Bit 2
63	P21	IN/OUT	LV	Port 2, Bit 1
64	P20	IN/OUT	LV	Port 2, Bit 0

5. Pin Descriptions for PSDIP64 package

Pin 1,2,5-10, P17 P10 I/O Port (Fig. 6–27)
These pins provide CPU controlled I/O ports. P10 can be configured as video input VIN5 (Fig. 6–9) on VCT 38xxB only!

Pin 3, VSUPP1* Supply Voltage, Port 1 Driver This pin is used as supply for the I/O port 1 driver.

Pin 4, GNDP1* Ground, Port 1 Driver
This is the ground reference for the I/O port 1 driver.

Pin 11, VOUT Analog Video Output (Fig. 6–12)
The analog video signal that is selected for the main (luma, CVBS) adc is output at this pin. On VCT 38xxB this pin can also deliver the sum of luma and chroma input signals (S-VHS). An emitter follower is required at this pin.

Pin 12, VRT Reference Voltage Top (Fig. 6–13)
Via this pin, the reference voltage for the A/D converters is decoupled. The pin is connected with 10 F/47 nF to the Signal Ground Pin.

Pin 13, SGND Signal GND for Analog Input
This is the high quality ground reference for the video input signals.

Pin 14, GNDAF* Ground, Analog Front-end
This pin has to be connected to the analog ground. No supply current for the digital stages should flow through this line.
Pin 15, VSUPAF* Supply Voltage, Analog Front-end
This pin has to be connected to the analog supply voltage. No supply current for the digital stages should flow through this line.

Pin 16,18, CBIN,CRIN Analog Chroma Component Input (Fig. 6–11)
These pins are used as the chroma component (CB,CR) inputs required for the analog YUV Interface. The input signal must be AC-coupled. The CRIN pin can alternatively be used as the second SVHS chroma input (CIN2).

Pin 17,18, CIN1,CIN2 Analog Chroma Input (Fig. 6–10)
These are the analog chroma inputs. A S-VHS chroma signal is converted using the chroma (Video 2) AD converter. A resistive divider is used to bias the input signal to the middle of the converter input range. The input signal must be AC-coupled. The CIN2 pin can alternatively be used as the chroma component (CR) input required for the analog YUV Interface.

Pins 1922, VIN1–4 Analog Video Input (Fig. 6–9)
These are the analog video inputs. A CVBS or S-VHS luma signal is converted using the luma (Video 1) AD converter. The input signal must be AC-coupled.

Pin 23, TEST Test Input (Fig. 6–5)
This pin enables factory test modes. For normal operation, it must be connected to ground.

Pin 24, HOUT Horizontal Drive Output (Fig. 6–16)
This open drain output supplies the drive pulse for the horizontal output stage. The polarity and gating with the flyback pulse are selectable by software.

Pin 25, VSUPD* Supply Voltage, Digital Circuitry

Pin 26, GNDD* Ground, Digital Circuitry
This is the ground reference for the digital circuitry.

Pin 27, FBLIN Fast Blank Input (Fig. 6–18)
These pins are used to switch the RGB outputs to the external analog RGB inputs. The active level (low or high) can be selected by software.

Pin 28,29,30, RIN, GIN, BIN Analog RGB Input (Fig.6–14)
These pins are used to insert an external analog RGB signal, e.g. from a SCART connector which can by switched to the analog RGB outputs with the fast blank signal. The analog back-end provides separate brightness and contrast settings for the external analog RGB signals.

Pin 31, VPROT Vertical Protection Input (Fig. 6–17)
In the event of a malfunction of the vertical deflection stage, the vertical protection circuitry prevents the picture tube from burnig in. During vertical blanking, a signal level of 2.5 V is sensed. If a negative edge cannot be detected, the RGB output signals are blanked.

Pin 32, SAFETY Safety Input (Fig. 6–17)
This is a three-level input. Low level means normal function. At the medium level RGB output signals are blanked. At high level RGB output signals are blanked and horizontal drive is shut off.

Pin 33, HFLB Horizontal Flyback Input (Fig. 6–17)
Via this pin the horizontal flyback pulse is supplied to the VCT 38xxA/B.

Pin 34, VERTQ, INTLC Inverted Vertical Sawtooth Output (Fig. 6–20) / Interlace Output (Fig. 6–19)
This pin supplies the inverted signal of VERT. Together with the VERT pin it can be used to drive symmetrical deflection amplifiers. The drive signal is generated with 15-bit precision. The analog voltage is generated by a 4 bit current-DAC with external resistor and uses digi-tal noise shaping. Alternatively this pin supplies the interlace information, the polarity is programmable.

Pin 35, VERT Vertical Sawtooth Output (Fig. 6–20)
This pin supplies the drive signal for the vertical output stage. The drive signal is generated with 15-bit precision. The analog voltage is generated by a 4 bit current-DAC with external resistor and uses digital noise shaping.

Pin 36, EW East-West Parabola Output (Fig. 6–21)
This pin supplies the parabola signal for the East-West correction. The drive signal is generated with 15 bit precision. The analog voltage is generated by a 4 bit current-DAC with external resistor and uses digital noise shaping.

Pin 37, SENSE Measurement ADC Input (Fig. 6–23)
This is the input of the analog to digital converter for the picture and tube measurement. Three measurement ranges are selectable with RSW1 and RSW2.

Pin 38, GNDM Measurement ADC Reference Input
This is the ground reference for the measurement A/D converter. Connect this pin to GND

Pin 39, 40, RSW1, RSW2 Range Switch for Measuring ADC (Fig. 6–22)
These pins are open drain pull-down outputs. RSW1 is switched off during cutoff and whitedrive measurement. RSW2 is switched off during cutoff measurement only.

Pin 41, SVMOUT Scan Velocity Modulation Output (Fig. 6–15)
This output delivers the analog SVM signal. The D/A converter is a current sink like the RGB D/A converters. At zero signal the output current is 50% of the maximum output current.

Pin 42, 43, 44, ROUT, GOUT, BOUT Analog RGB Output (Fig. 6–15)
These pins are the analog Red/Green/Blue outputs of the back-end. The outputs are current sinks.

Pin 45, VSUPAB* Supply Voltage, Analog Back-end
This pin has to be connected to the analog supply voltage. No supply current for the digital stages should flow through this line.

Pin 46, GNDAB* Ground, Analog Back-end
This pin has to be connected to the analog ground. No supply current for the digital stages should flow through this line.

Pin 47, VRD DAC Reference Decoupling (Fig. 6–24)
Via this pin the DAC reference voltage is decoupled by an external capacitor. The DAC output currents depend on this voltage, therefore a pull-down transistor can be used to shut off all beam currents. A decoupling capacitor of 4.7 F in parallel to 100 nF (low inductance) is required.

Pin 48, XREF DAC Current Reference (Fig. 6–24)
External reference resistor for DAC output currents, typical 10 k ßŸ to adjust the output current of the D/A converters. (see recommended operating conditions).
This resistor has to be connected to analog ground as closely as possible to the pin.

Pin 49, 50, 51, AIN13 Analog Audio Input (Fig. 6–25)
The analog input signal from TUNER or SCART is fed to this pin. The input signal must be AC-coupled. Alternatively these pins can be used as digital input port (Fig. 6–25).

Pin 52, 53, AOUT1, AOUT2 Analog Audio Output (Fig. 6–26)
These pins are the analog audio outputs. Connections to these pins must use a 680 ohm series resistor as closely as possible to these pins. The output signals are intended to be AC coupled. Alternatively these pins can be used as digital input port (Fig. 6–26).

Pin 54, VSUPS* Supply Voltage, Standby

Pin 55, GNDS* Ground, Standby
This is the ground reference for the standby circuitry.

Pins 56 and 57, XTAL1 Crystal Input and XTAL2 Crystal Output (Fig. 6–7)
These pins are connected to an 20.25 MHz crystal oscillator which is digitally tuned by integrated shunt capacitances. The CLK20 clock signal is derived from this oscillator.

Pin 58, RESQ Reset Input/Output (Fig. 6–6)
A low level on this pin resets the VCT 38xxA/B. The internal CPU can pull down this pin to reset external devices connected to this pin.

Pin 59, SCL I^2C Bus Clock (Fig. 6–6)
This pin connects to the I2C bus clock line. The signal can be pulled down by external slave ICs to slow down data transfer.

Pin 60, SDA I^2C Bus Data (Fig. 6–6)
This pin connects to the I2C bus data line.

Pin 6164, P20P23 I/O Port (Fig. 6–27)
These pins provide CPU controlled I/O ports.

6. Pin Circuits

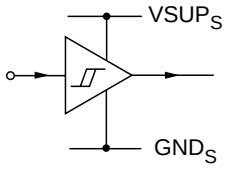


Fig. 6-5 : Input pins TEST, DISINTROM

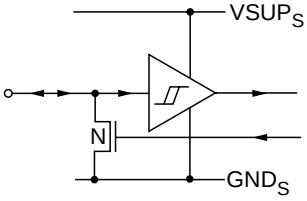


Fig. 6-6 : Input/Output pins RESQ, SDA, SCL

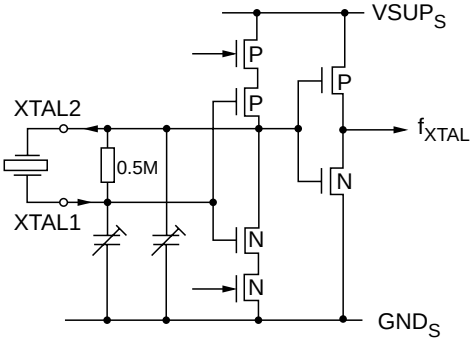


Fig. 6-7 : Input/Output pins XTAL1, XTAL2

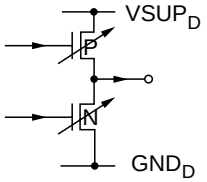


Fig. 6-8 : Output pin CLK20

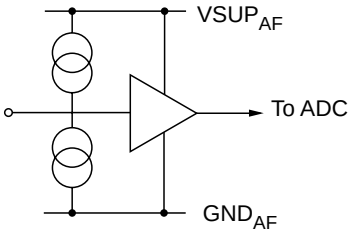


Fig. 6-9 : Input pins VIN1-VIN5

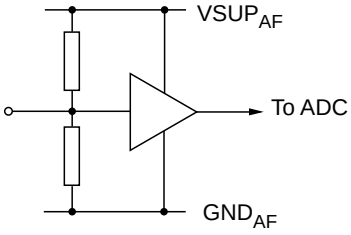


Fig. 6-10 : Input pins CIN1-CIN2

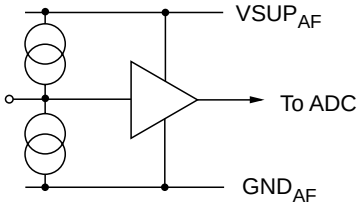


Fig. 6-11 : Input pins CRIN, CBIN

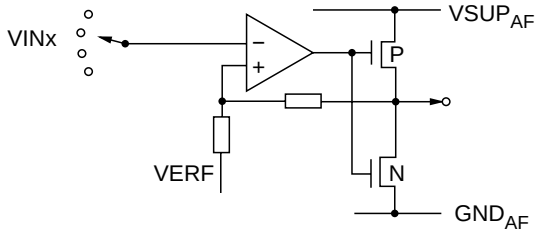


Fig. 6-12 : Output pin VOUT

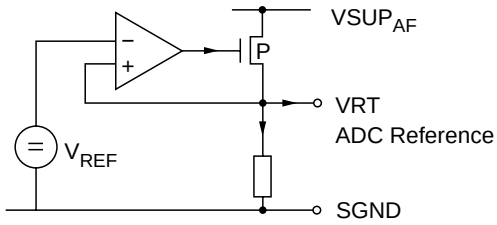


Fig. 6-13 : Supply pins VRT, SGND

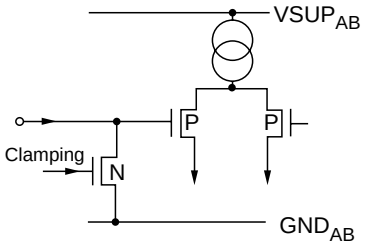


Fig. 6-14 : Input pins RIN, GIN, BIN

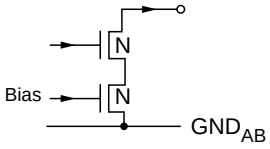


Fig. 6-15 : Output pin ROUT, GOUT, BOUT, SVMOUT

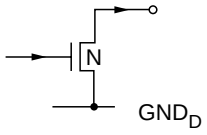


Fig. 6-16 : Output pins HOUT

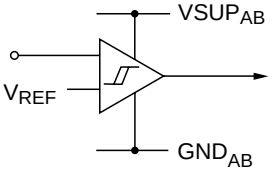


Fig. 6-17 : Input pins SAFETY, VPROT, HGLB

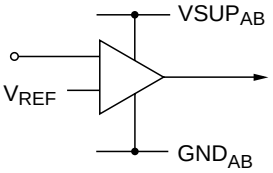


Fig. 6-18 : Input pins FBIN

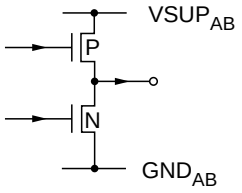


Fig. 6-19 : Output pin INTLC

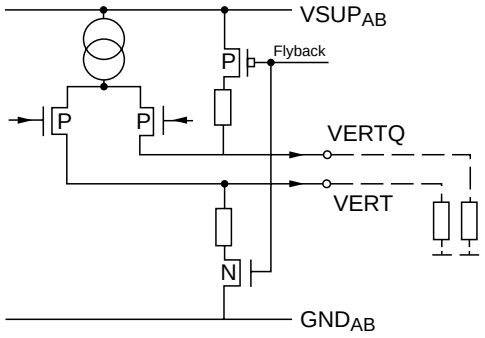


Fig. 6-20 : Output pins VERT, VERTQ

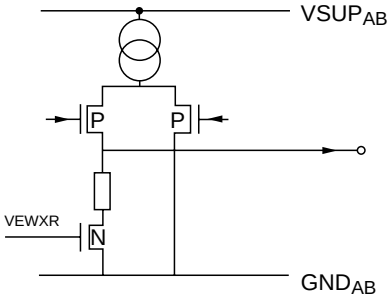


Fig. 6-21 : Output pin EW

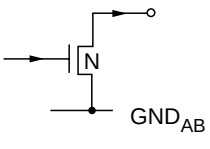


Fig. 6-22 : Output pins RSW1, RSW2

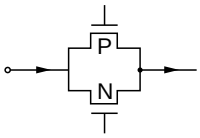


Fig. 6-23 : Input pins SENSE

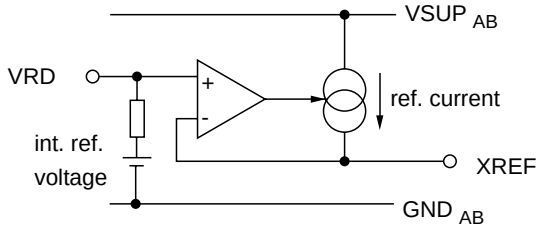


Fig. 6-24 : Supply pins XREF, VRD

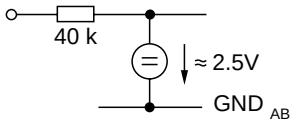


Fig. 6-25 : Input pins AIN1-3

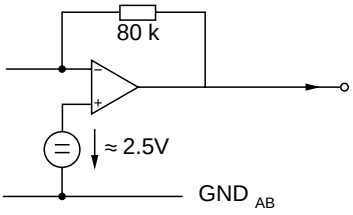


Fig. 6-26 : Output pins AOUT1, AOUT2

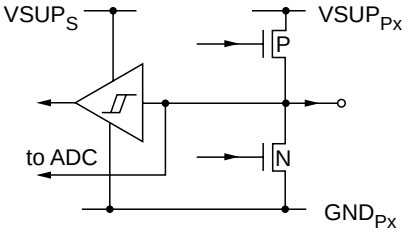


Fig. 6-27 : Input/Output pins P10-P17,
P20-P27, P30-P37

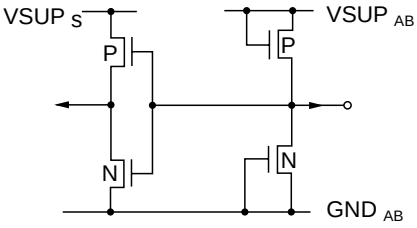


Fig. 6-28 : Input pins P42-P46

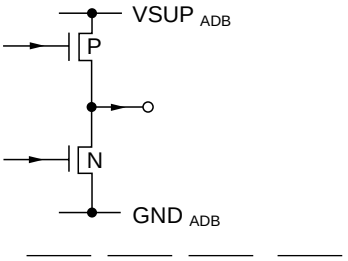


Fig. 6-29 : Outpin pins ADB0-ADB18,
OE1, OE2, WE1, WE2

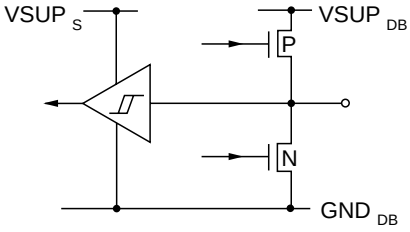


Fig. 6-30 : Input/Output pins DB0-DB7

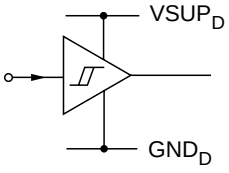
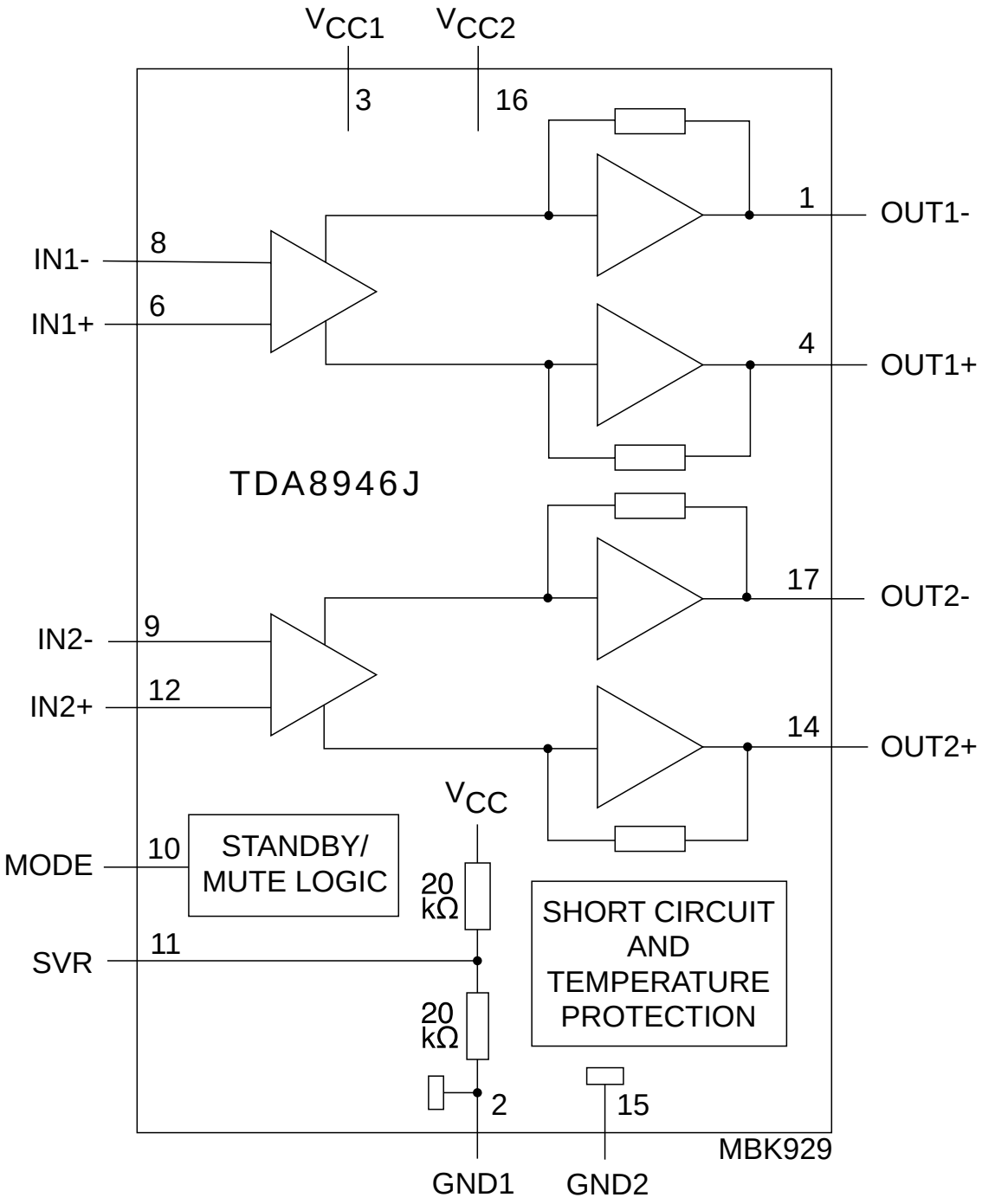


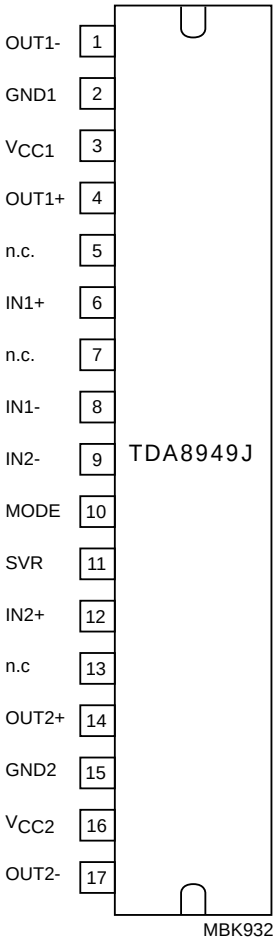
Fig. 6-31 : Input pins VB0-VB7, VBCLK

1. Block Diagram



2. Block Diagram

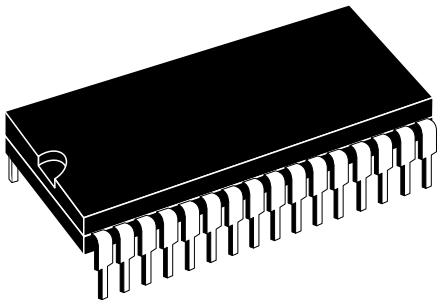
2-1 Pinning



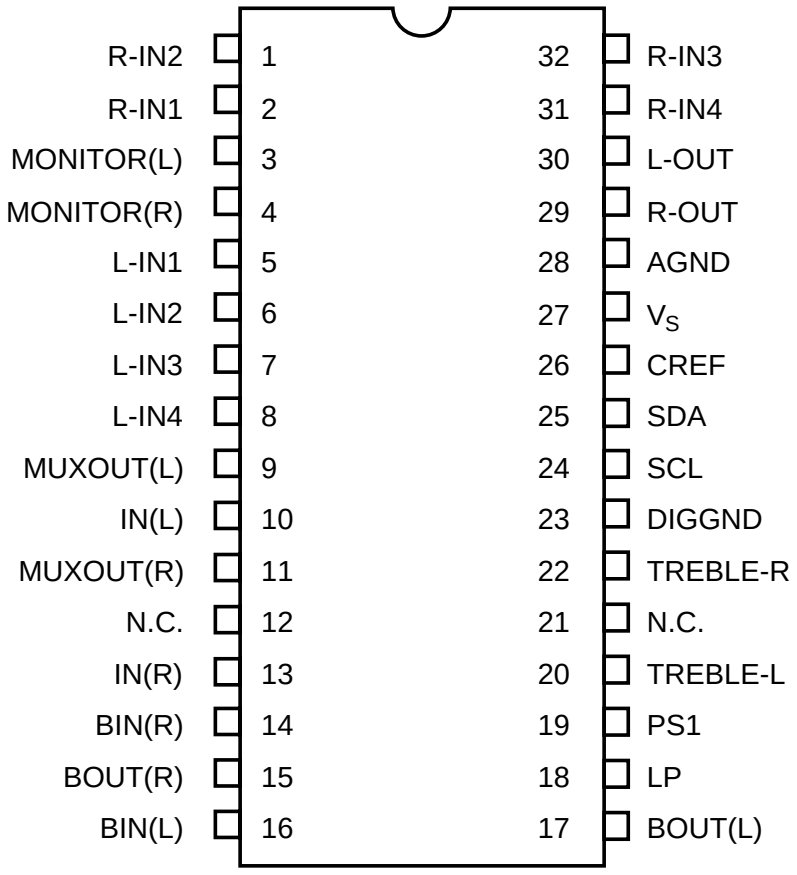
2-2 Pin description

Symbol	Pin	Description
OUT1-	1	negative loudspeaker terminal 1
GND1	2	ground channel 1
V_{CC1}	3	supply voltage channel 1
OUT1+	4	positive loudspeaker terminal 1
n.c	5	not connected
IN1+	6	positive input 1
n.c	7	not connected
IN1-	8	negative input 1
IN2-	9	negative input 2
MODE	10	mode selection input (standby, mute, operating)
SVR	11	half supply voltage decoupling (ripple rejection)
IN2+	12	positive input 2
n.c	13	not connected
OUT2+	14	positive loudspeaker terminal 2
GND2	15	ground channel 2
V_{CC2}	16	supply voltage channel 2
OUT2-	17	negative loudspeaker terminal 2

- 4STEREOINPUTS
- INPUTATTENUATIONCONTROLIN0.5dB STEP
- TREBLEANDBASSCONTROL
- TWOSURROUNDMODEAVAILABLEWITH
  4SELECTABLERESPONSES:
  - MUSIC
  - SIMULATEDSTEREO
- TWOSPEAKERATTENUATORS:
  - 2INDEPENDENTSPEAKERCONTROLS
    IN1dBSTEPSFORBALANCEFACILITY
  - INDEPENDENTMUTEFUNCTION
- ALLFUNCTIONSPROGRAMMABLEVIASE-RIALBUS
- 2MONITOROUTPUT(ONLYFORTDA7442)



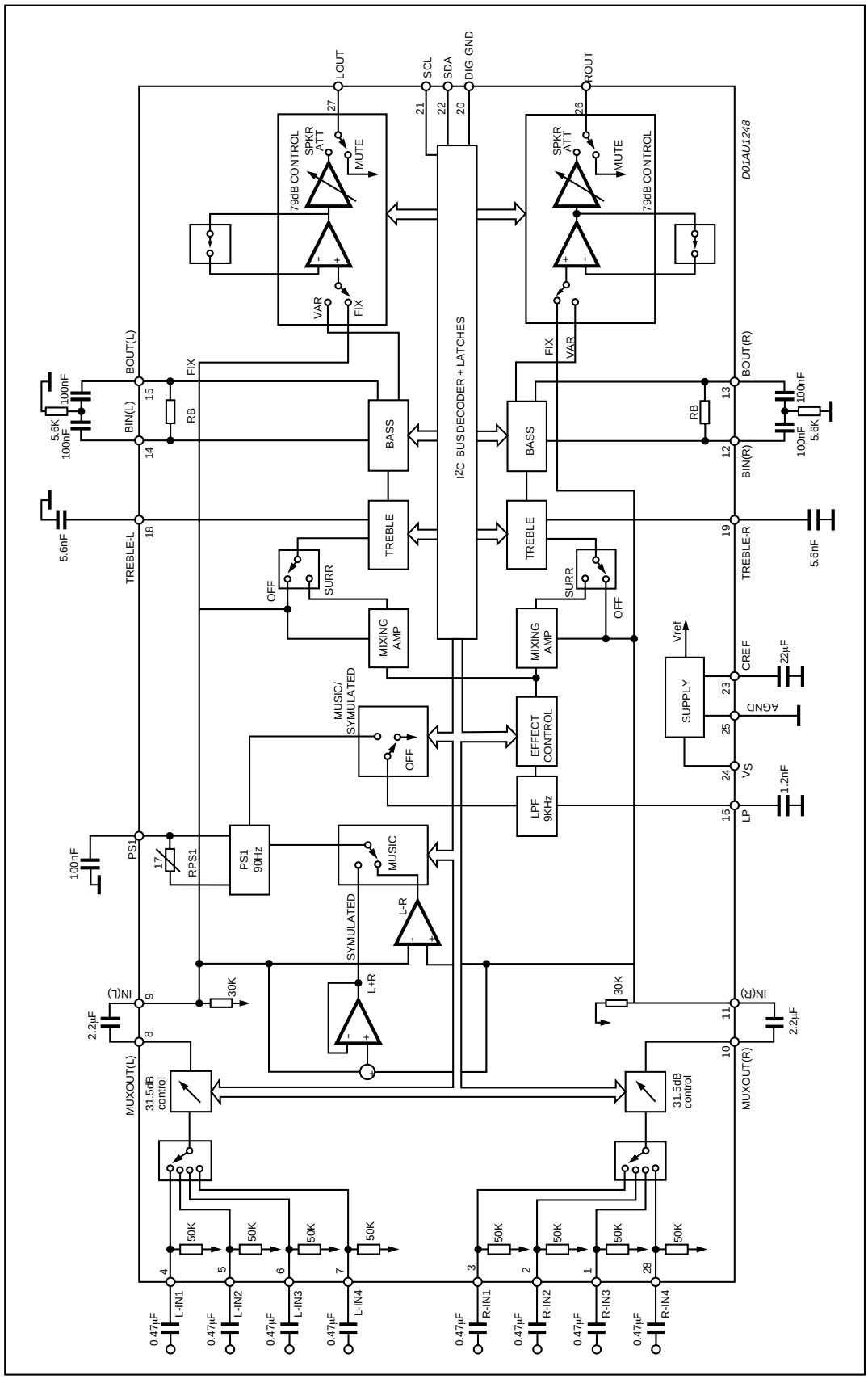
SDIP32



D01AU1247

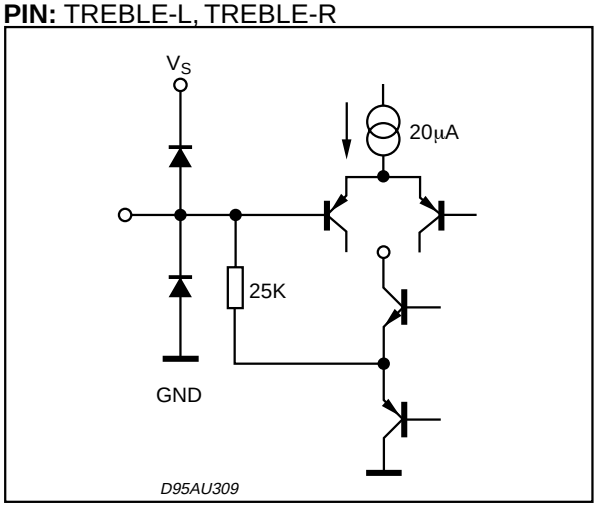
SDIP32

BLOCK DIAGRAM(TDA7442D)

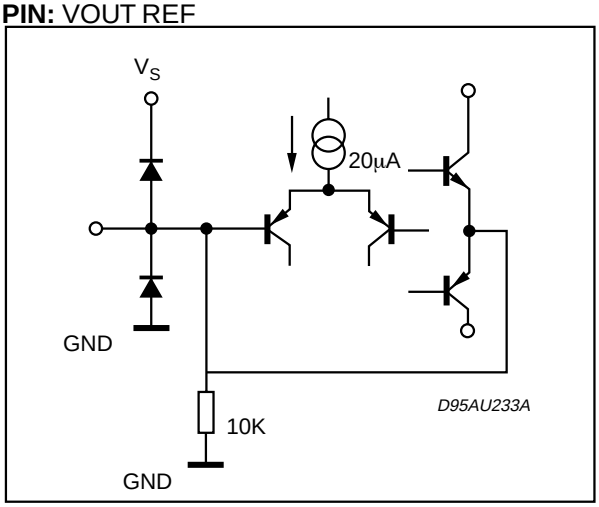


TDA7442 - TDA7442D

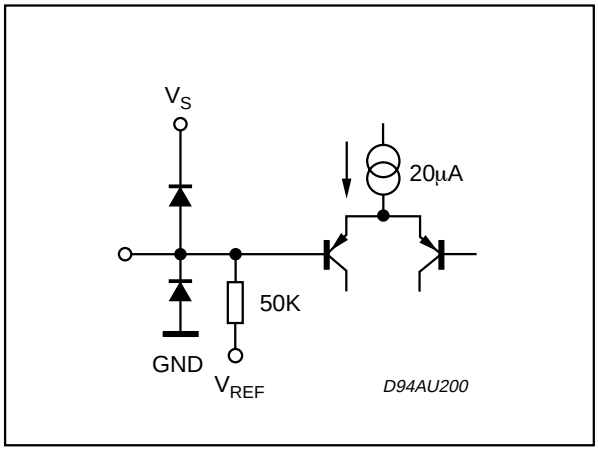
PIN: TREBLE-L, TREBLE-R



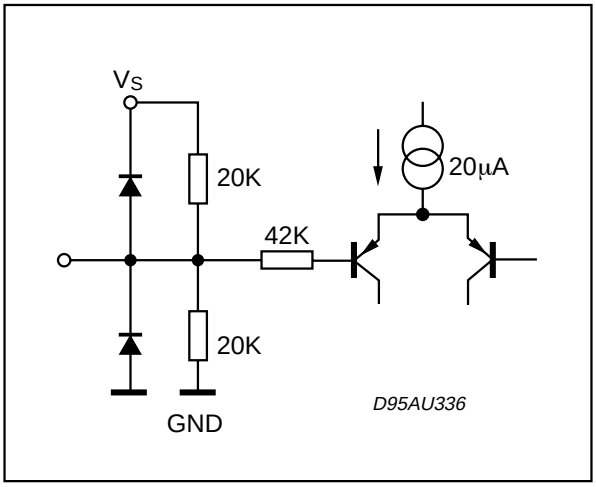
PIN: VOUT REF



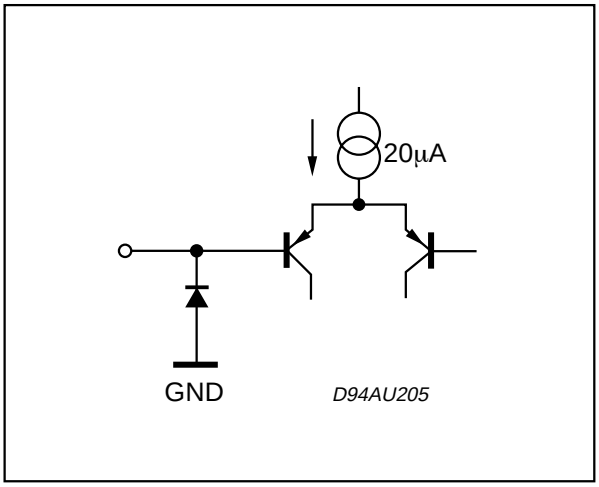
PIN: L-IN, R-IN, L-IN2, R-IN2, L-IN3, R-IN3, L-IN4, R-IN4,



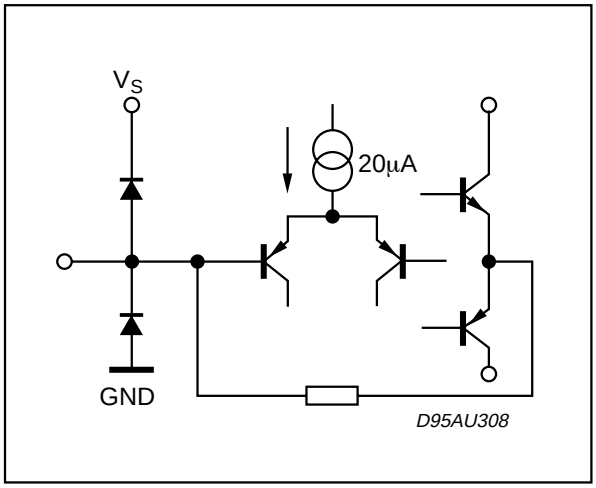
PIN: CREF



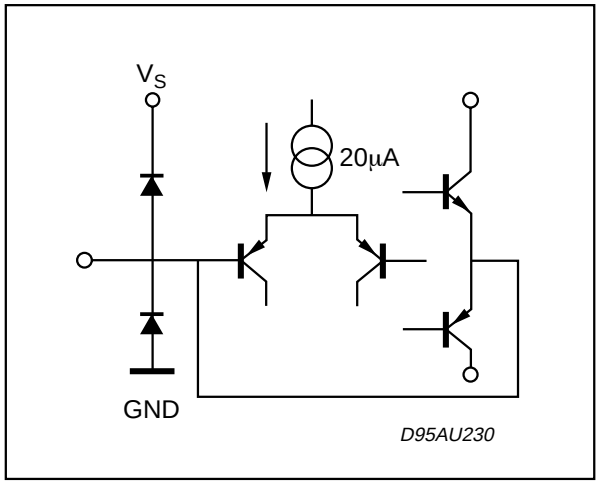
PIN: SCL, SDA



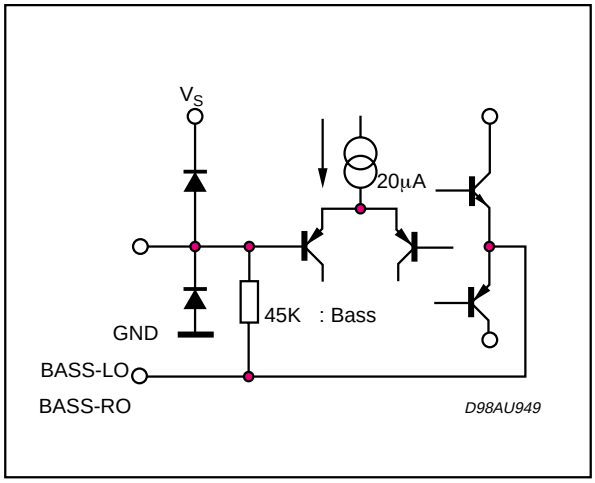
PIN: LP



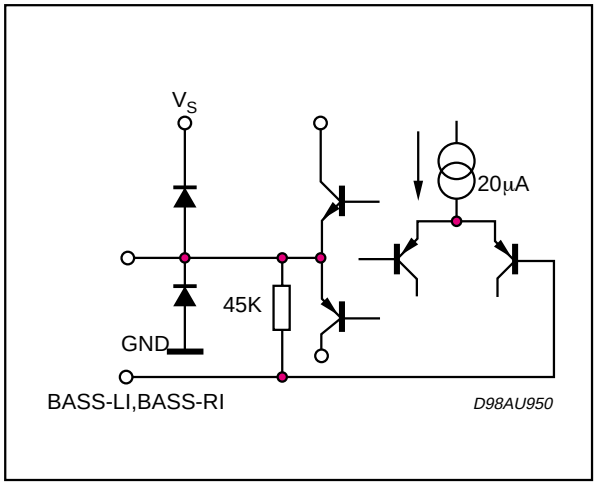
PIN: L-OUT, R-OUT



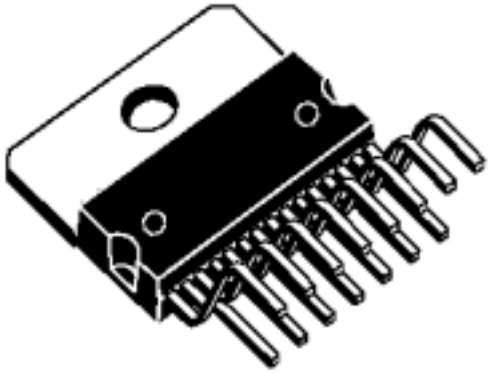
PIN: BASS-LI, BASS-RI

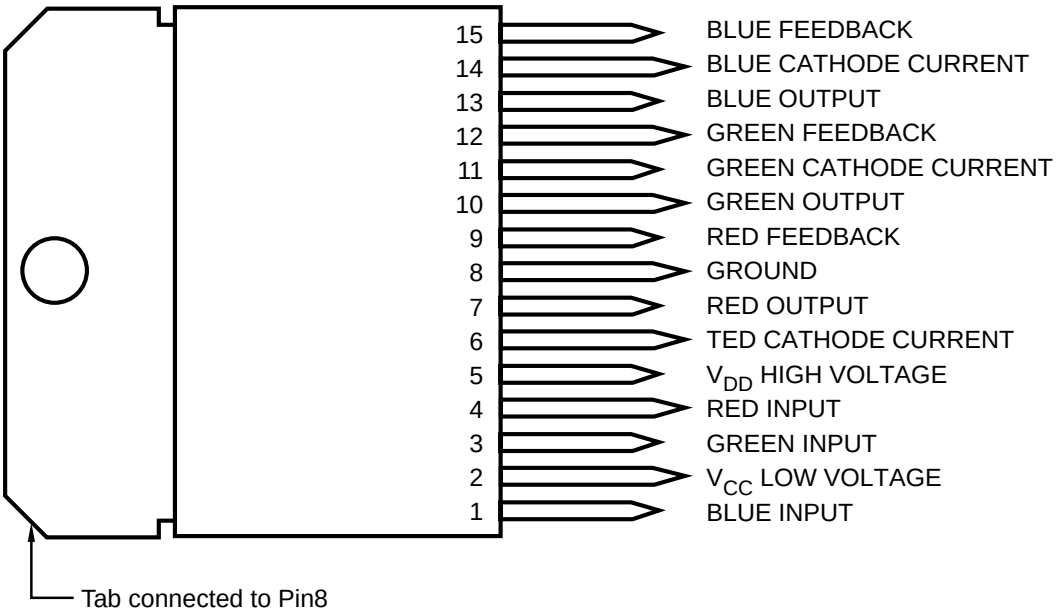


PIN: BASS-LO, BASS-RO



- BANDWIDTH : 10MHz TYPICAL
- RISE AND FALL TIME : 50ns TYPICAL
- CRT CATHODES CURRENT OUTPUTS FOR PARALLEL OR SEQUENTIAL CUT-OFF OR DRIVE ADJUSTMENT
- FLASHOVER PROTECTION
- POWER DISSIPATION : 3.5W
- ESD PROTECTED



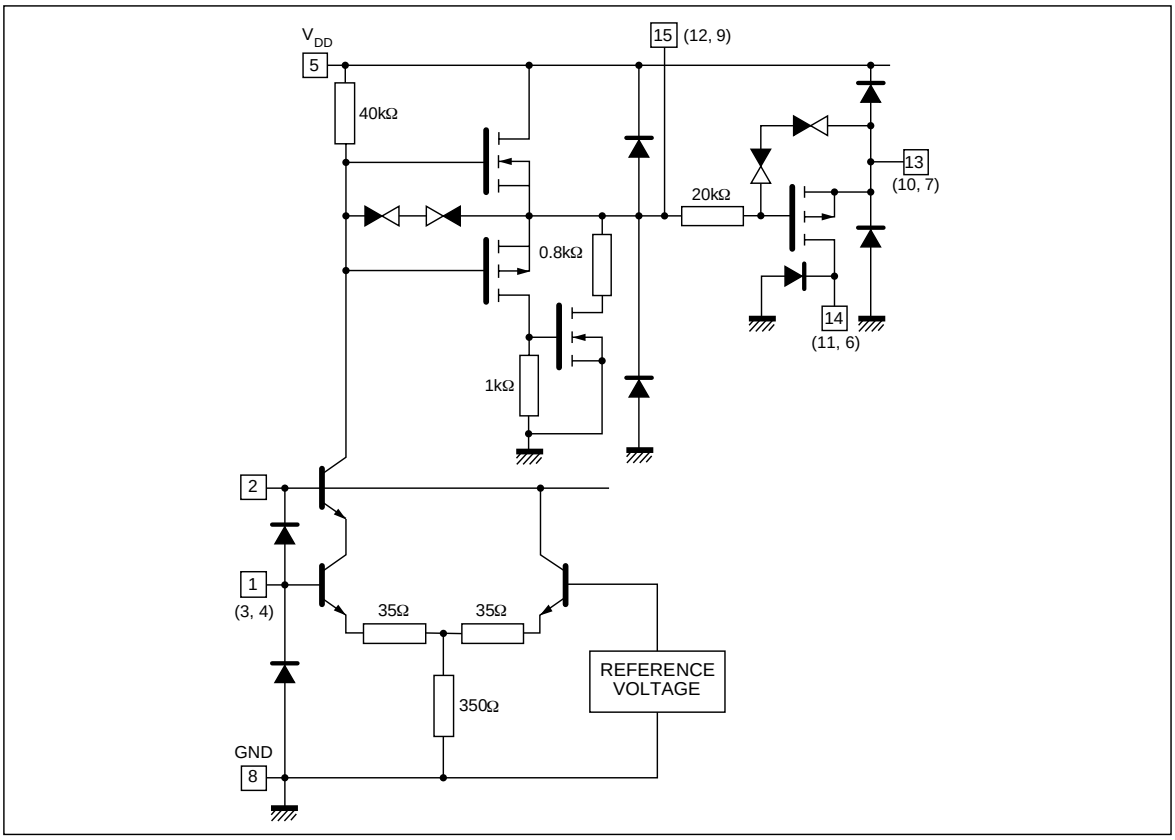


PIN FUNCTION

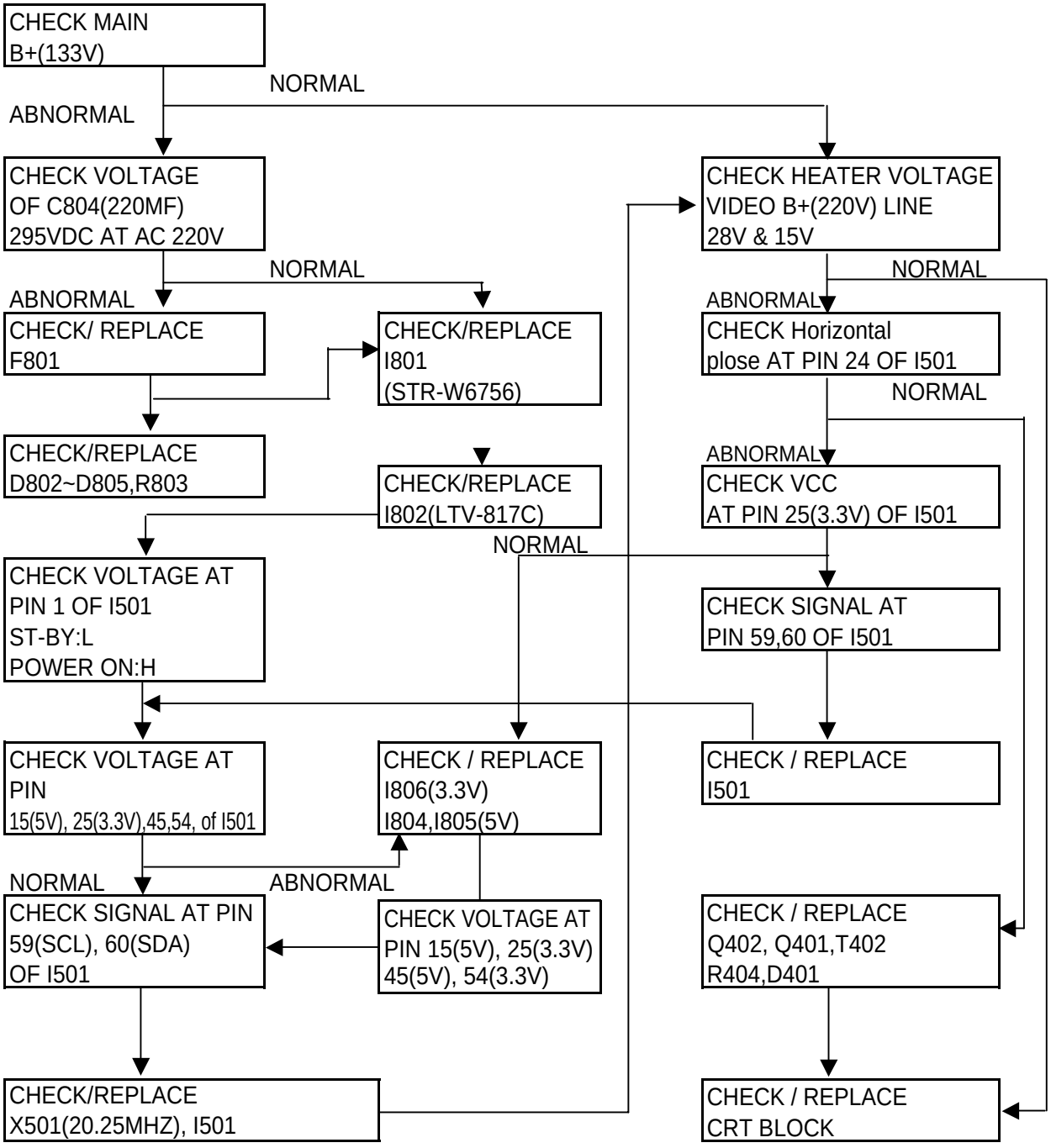
N	Function	Description
1	Blue Input	Input of the “blue” amplifier. It is a virtual ground with 3.8V bias voltage, 15 microamperss input bias current with 14KΩ input resistance.
2	Vcc	Low voltage power supply, typically 12V.
3	Green Input	See Pin 1.
4	Red Input	See Pin 1.
5	V_{DD}	High voltage power supply, typcally 200V.
6	Red Cathode Current	Provides the video processor with a copy of the DC current flowing into the red cathode, for automatic cut-off or gain adjustment. If this control is not used, Pin 6 must be grounded.
7	Red Output	Output driving the red cathode. Pin 7 is internally protected ahainst CRT arc discharges by a diode limiting the output voltage to V_{DD}.
8	Ground	Also connected to the heatsink.
9	Red Feedback	Output driving the feedback resistor network for the red amplifier.
10	Green Output	See Pin 7.
11	Green Cathode Current	See Pin 6.
12	Green Feedback	See Pin 9.
13	Blue Output	See Pin 7.
14	Blue Cathode Current	See Pin 6.
15	Blue Feedback	See Pin 9.

BLOCK DIAGRAM OF EACH CHANNEL

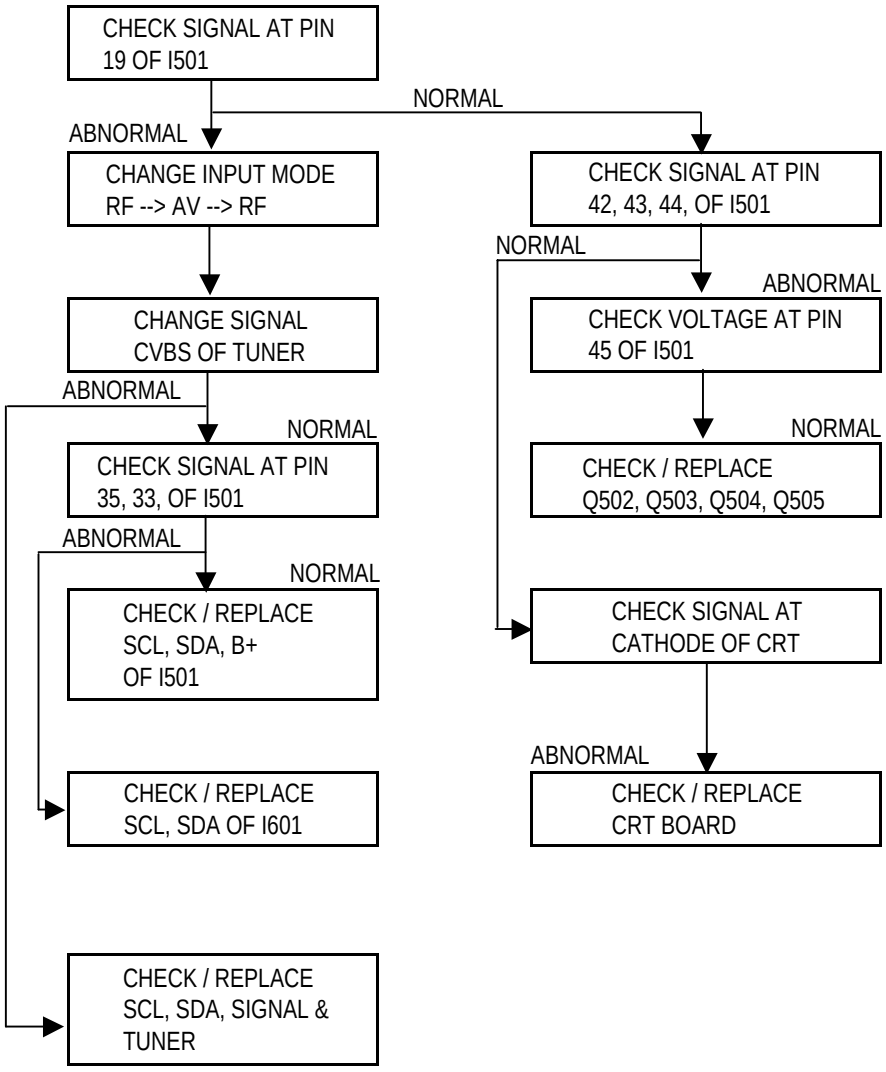
BLOCK DIAGRAM OF EACH CHANNEL



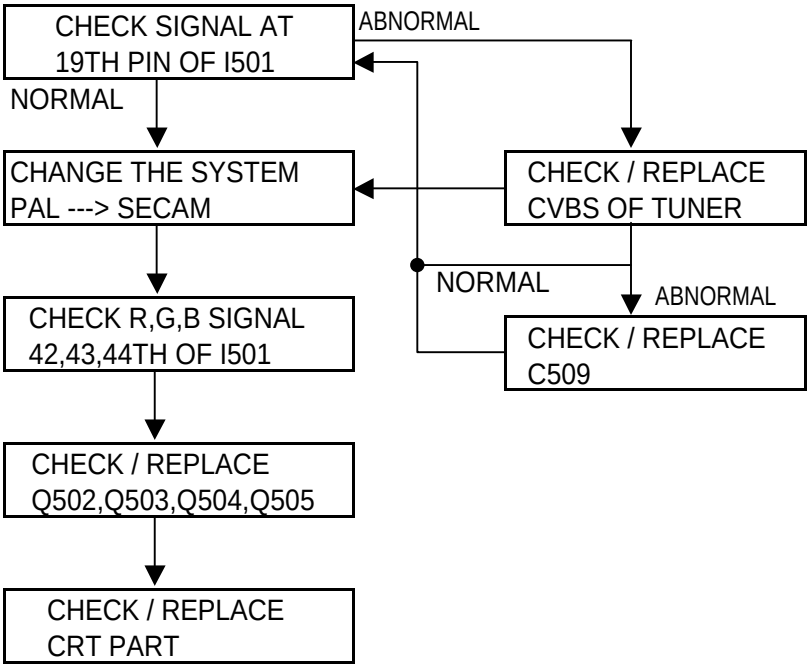
1. NO RASTER


CHECK MAIN
B+(133V)
NORMAL
ABNORMAL
CHECK VOLTAGE
OF C804(220MF)
295VDC AT AC 220V
NORMAL
ABNORMAL
CHECK/ REPLACE
F801
CHECK/REPLACE
I801
(STR-W6756)
CHECK/REPLACE
D802~D805,R803
CHECK/REPLACE
I802(LTV-817C)
NORMAL
CHECK VOLTAGE AT
PIN 1 OF I501
ST-BY:L
POWER ON:H
CHECK VOLTAGE AT
PIN
15(5V), 25(3.3V),45,54, of I501
CHECK / REPLACE
I806(3.3V)
I804,I805(5V)
NORMAL
ABNORMAL
CHECK SIGNAL AT PIN
59(SCL), 60(SDA)
OF I501
CHECK VOLTAGE AT
PIN 15(5V), 25(3.3V)
45(5V), 54(3.3V)
CHECK/REPLACE
X501(20.25MHZ), I501
CHECK HEATER VOLTAGE
VIDEO B+(220V) LINE
28V & 15V
NORMAL
ABNORMAL
CHECK Horizontal
plose AT PIN 24 OF I501
NORMAL
ABNORMAL
CHECK VCC
AT PIN 25(3.3V) OF I501
CHECK SIGNAL AT
PIN 59,60 OF I501
CHECK / REPLACE
I501
CHECK / REPLACE
Q402, Q401,T402
R404,D401
CHECK / REPLACE
CRT BLOCK

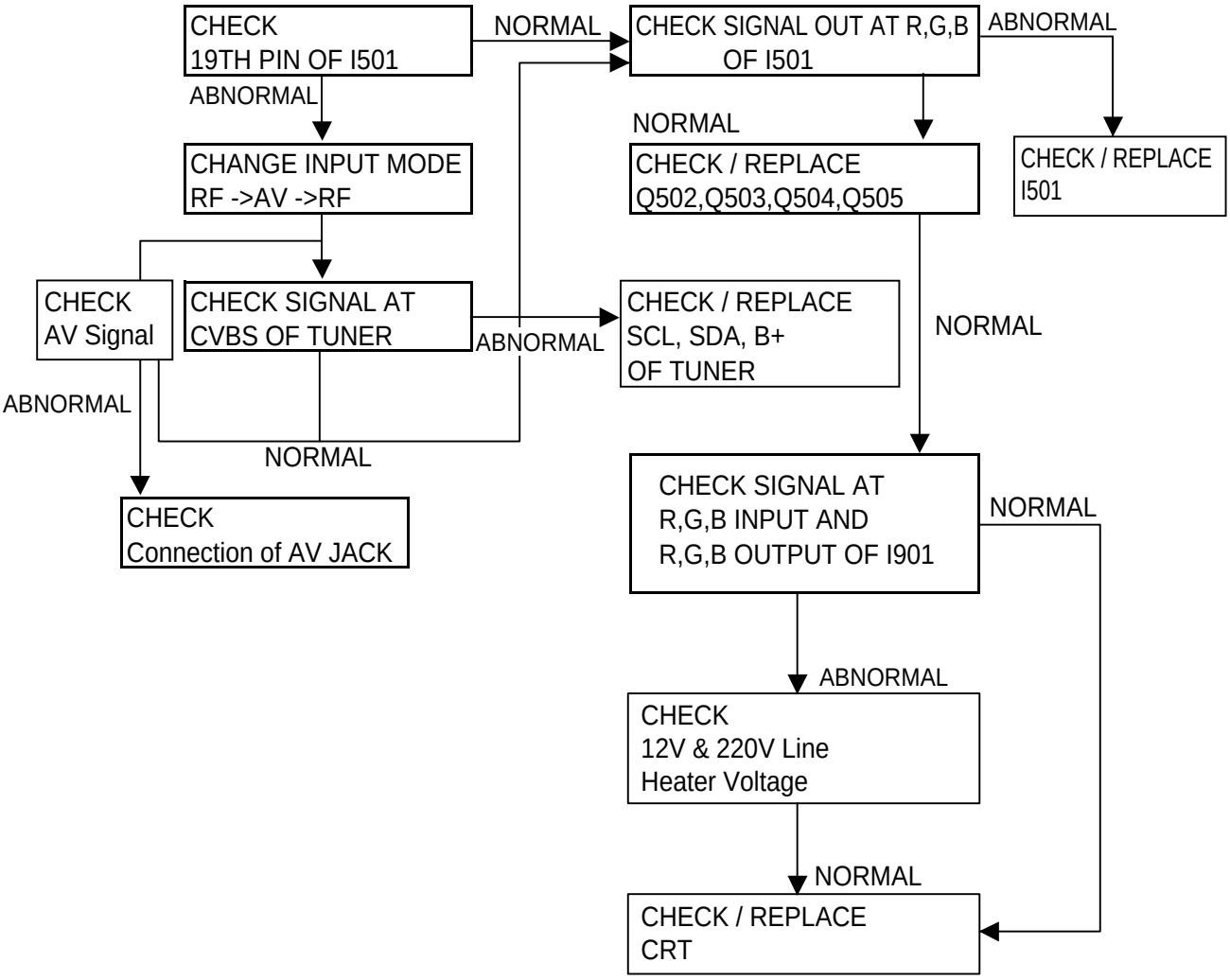
2. NO PICTURE(RASTER OK)


CHECK SIGNAL AT PIN 19 OF I501
NORMAL
ABNORMAL
CHANGE INPUT MODE RF --> AV --> RF
CHECK SIGNAL AT PIN 42, 43, 44, OF I501
NORMAL
ABNORMAL
CHANGE SIGNAL CVBS OF TUNER
CHECK VOLTAGE AT PIN 45 OF I501
ABNORMAL
NORMAL
NORMAL
CHECK SIGNAL AT PIN 35, 33, OF I501
CHECK / REPLACE Q502, Q503, Q504, Q505
ABNORMAL
NORMAL
CHECK / REPLACE SCL, SDA, B+ OF I501
CHECK SIGNAL AT CATHODE OF CRT
ABNORMAL
CHECK / REPLACE SCL, SDA OF I601
CHECK / REPLACE CRT BOARD
CHECK / REPLACE SCL, SDA, SIGNAL & TUNER

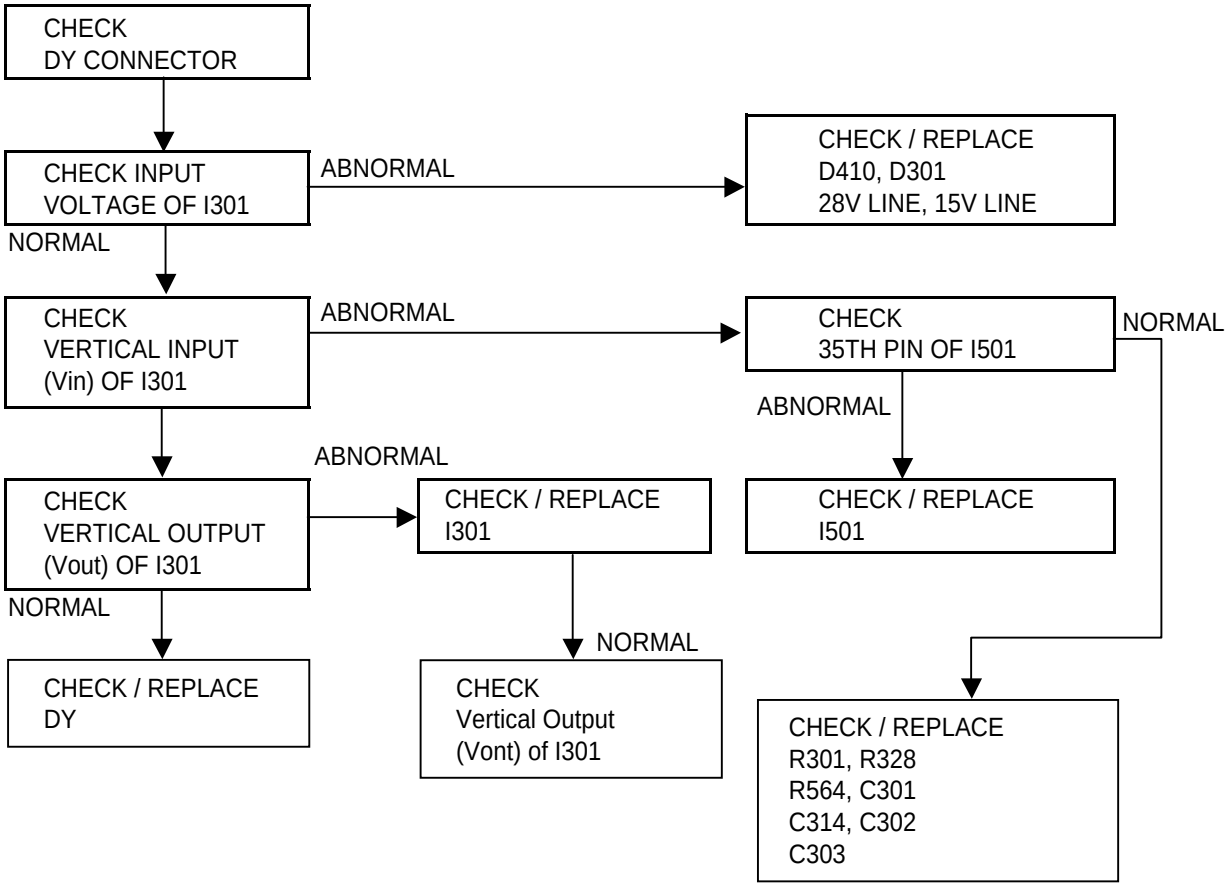
3. NO COLOR


CHECK SIGNAL AT 19TH PIN OF I501
ABNORMAL
NORMAL
CHANGE THE SYSTEM PAL ---> SECAM
CHECK / REPLACE CVBS OF TUNER
NORMAL
ABNORMAL
CHECK R,G,B SIGNAL 42,43,44TH OF I501
CHECK / REPLACE C509
CHECK / REPLACE Q502,Q503,Q504,Q505
CHECK / REPLACE CRT PART

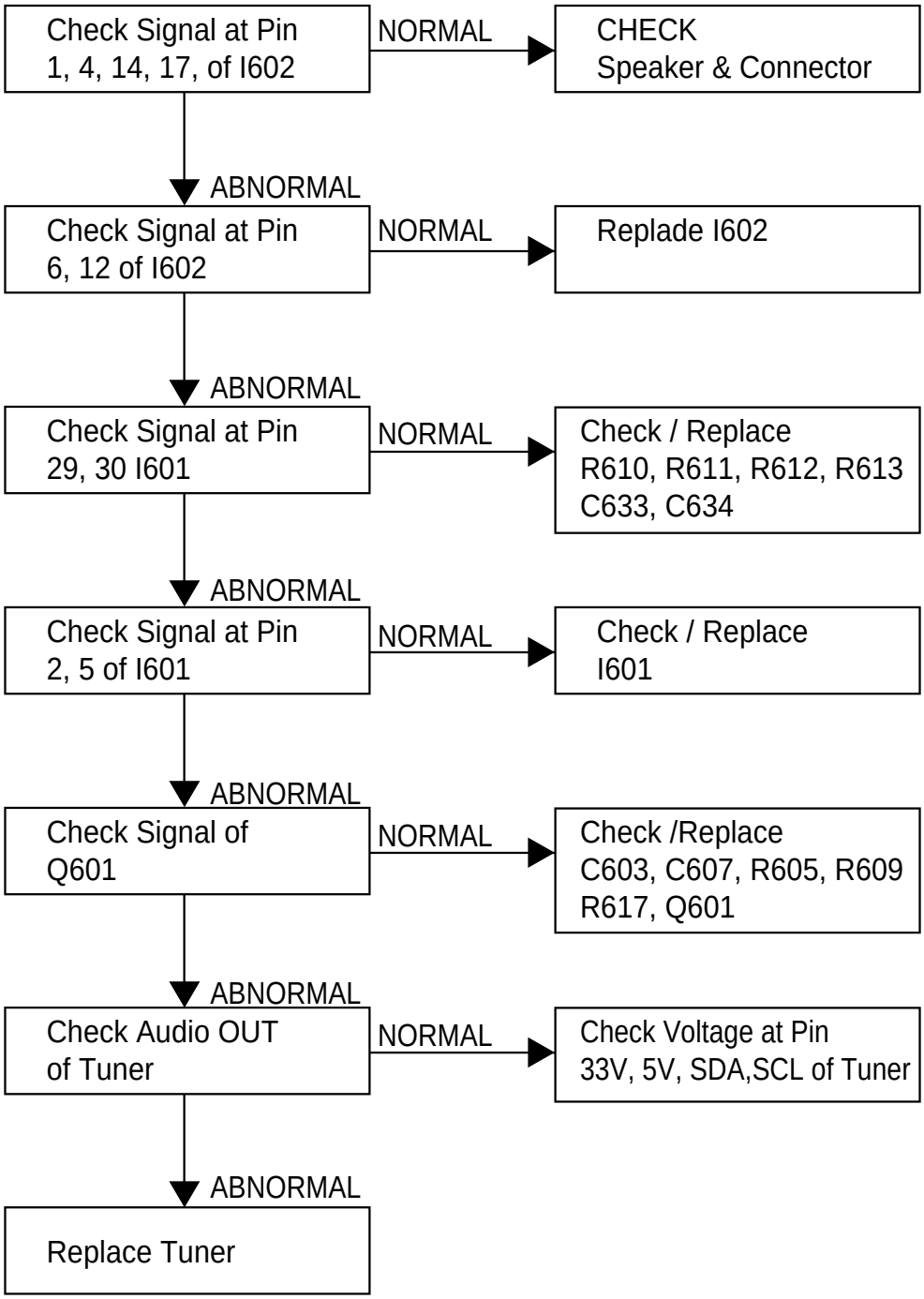
4. NO PICTURE


CHECK
19TH PIN OF I501
NORMAL
CHECK SIGNAL OUT AT R,G,B
OF I501
ABNORMAL
ABNORMAL
NORMAL
CHANGE INPUT MODE
RF ->AV ->RF
CHECK / REPLACE
Q502,Q503,Q504,Q505
CHECK / REPLACE
I501
CHECK
AV Signal
CHECK SIGNAL AT
CVBS OF TUNER
ABNORMAL
CHECK / REPLACE
SCL, SDA, B+
OF TUNER
NORMAL
ABNORMAL
NORMAL
CHECK SIGNAL AT
R,G,B INPUT AND
R,G,B OUTPUT OF I901
NORMAL
CHECK
Connection of AV JACK
ABNORMAL
CHECK
12V & 220V Line
Heater Voltage
NORMAL
CHECK / REPLACE
CRT

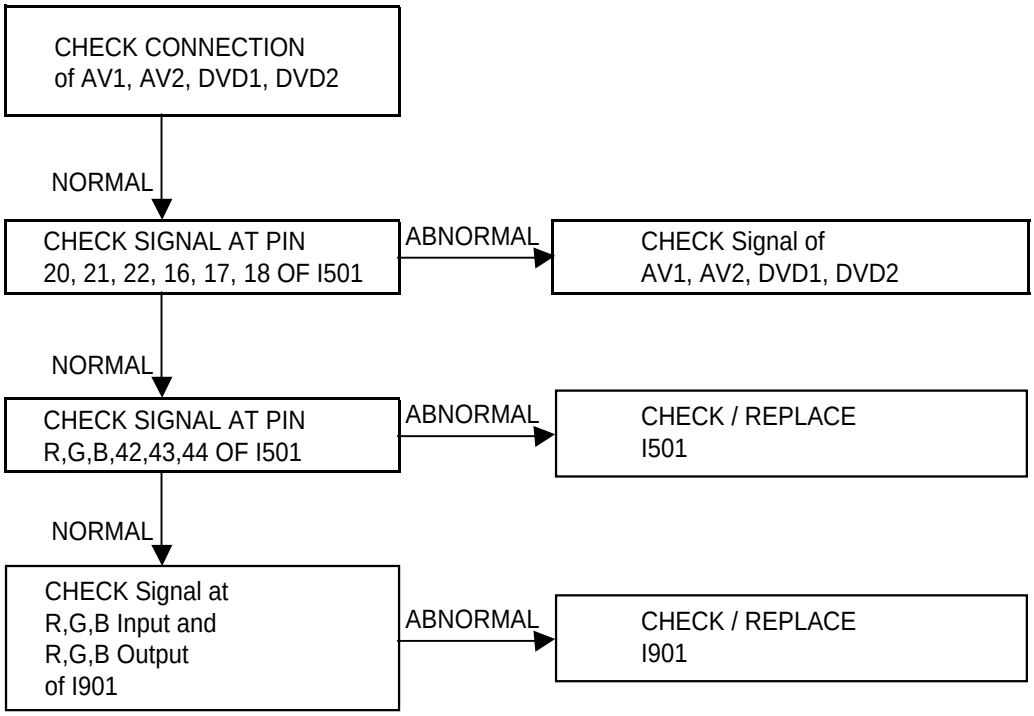
5. NO VERTICAL SCANNING(ONE HORIZONTAL LINE RASTER)



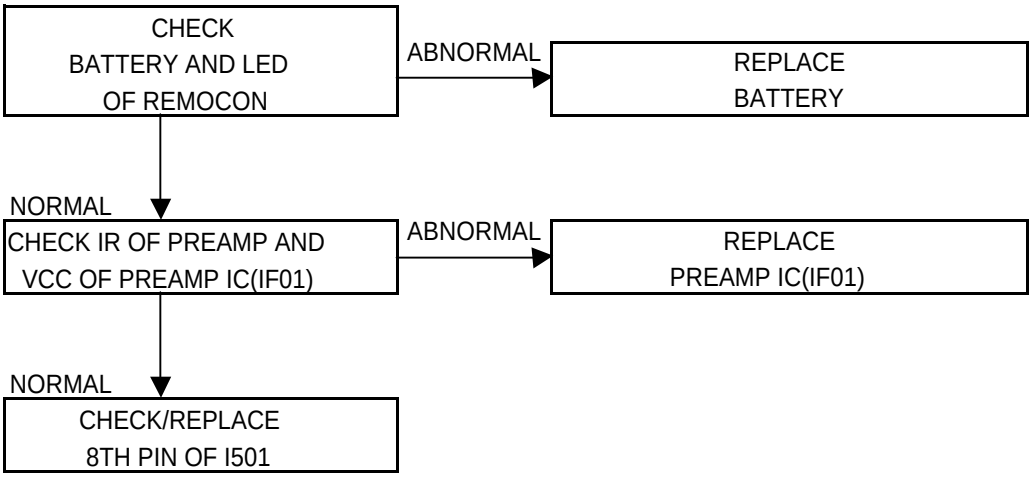
6. NO MIAN SOUND (RF)



7. NO EXTERNAL AV(RF OK)



8.REMOTE CONTROL UNIT TROUBLE



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